IN THE CIRCUIT COURT OF OHIO COUNTY
WEST VIRGINIA
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IN RE: TOBACCO LITIGATION
(MEDICAL MONITORING CASES)

Civil Action No. 00-C-6000

(Judge Arthur M. Recht)
(Judge Tod J. Kaufman)

DEPOSITION OF
MARK E. SOCKELL, M.D.

September 1, 2000

REPORTED BY: CLARE MACY, CSR 5256

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EXHIBITS MARKED FOR IDENTIFICATION

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BE IT REMEMBERED that, pursuant to Notice, and on Friday, September 1, 2000, commencing at 9:14 a.m. thereof, at SEDGWICK, DETERT, MORAN & ARNOLD, One Embarcadero Center, San Francisco, California, before me, CLARE MACY, a Certified Shorthand Reporter, personally appeared

MARK E. SOCKELL, M.D.

called as a witness by the Plaintiffs, who, having been first duly sworn, was examined and testified as follows:

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NESS, MOTLEY, LOADHOLT, RICHARDSON & POOLE, 28 Bridgeside Boulevard, Charleston, South Carolina 29465, represented by FREDERICK J. JEKEL, Attorney at Law, appeared as counsel on behalf of the Plaintiffs.

DINSMORE & SHOHL LLP, 1900 Chemed Center, 255 East Fifth Street, Cincinnati, Ohio 45202, represented by FREDERICK N. HAMILTON, Attorney at Law, appeared as counsel on behalf of the Defendant Brown & Williamson.

JACKSON & KELLY, PLLC, 1600 Laidley Tower, Charleston, West Virginia 25322, represented by KAREN M. REXING WEBER, Attorney at Law, appeared as counsel on behalf of the Defendant Brown & Williamson.

THOMPSON COBURN LLP, One Firstar Plaza, St. Louis, Missouri 63101, represented by CARL ROWLEY and ADAM MILLER, Attorneys at Law, appeared telephonically as counsel on behalf of the Defendant Lorillard Tobacco Company.

DECHERT, PRICE & RHOADES, 1717 Arch Street, Suite 4000, Philadelphia, Pennsylvania 19103, represented by JUDY LEONE, Attorney at Law, appeared telephonically as counsel on behalf of the Defendant Phillip Morris.

FARRELL, FARRELL & FARRELL, L.C., The Farrell Building, 914 Fifth Avenue, Huntington, West Virginia 25772-6457, represented by PAUL V. MORRISON, II, Attorney at Law, appeared telephonically as counsel on behalf of Lorillard Tobacco Company.

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EXAMINATION BY MR. JEKEL

MR. JEKEL: Q. Good morning, Dr. Sockell. My name is Fritz Jekel. I represent some of the Plaintiffs in this matter. Have you had your deposition taken before?

A. Yes, I have.

Q. Do you understand, it's a question and answer session where the court reporter is taking down everything we say. So it will be important for you to

allow me to finish my questions before you give an answer. If at any time you do not understand my question, which may happen frequently, or you need additional information in which to answer my question, just let me know, and I'll do my best. If you answer a question, I will assume that you understood it and that you could answer.

Again, today, we're only looking for your personal knowledge. If you cannot answer a question or if you're speculating, just let us know, and we'll stop right there. Fair enough?

A. Fair enough.

Q. Dr. Sockell, when were you originally retained to provide expert services in the Blankenship matter?

A. I believe that was June, middle June of this year. Maybe July.

Q. How were you retained in this matter? Was it a telephone call or an in-person meeting?

A. I received a telephone call from Fred Hamilton.

Q. Did Mr. Hamilton disclose to you who he represented in this matter?

A. Yes, he did.

Q. And what is your understanding of who Mr. Hamilton and his firm represents?

A. He told me he represented Brown & Williamson.

Q. During that initial phone conversation, did Mr. Hamilton give you any information on the individual plaintiffs involved in this case, Ms. Blankenship?

A. No, he didn't.

Q. Have you at any time received any medical records as it relates to the Plaintiffs in this action?

A. No, I haven't.

Q. Did Mr. Hamilton give you a description of the case?

A. I believe during the initial phone conversation, he said he was looking for people with expertise in medical monitoring to help decide whether a medical monitoring program would be beneficial for smokers in the State of West Virginia.

Q. Did he give you any -- I know we've gone

through, we've marked a whole bunch of stuff here on the table, which we'll talk about in just a minute. But other than this -- First of all, were you provided any -- a copy of a complaint in this action or any discovery that was filed in this action?

A. At which point in time are we talking about?

Q. Let's go to the initial phone -- the initial contact.

A. I didn't receive anything at the time of the initial phone contact.

Q. Subsequent to the initial contact, did you receive a copy of the complaint in this matter or any discovery that was filed in this matter?

MR. HAMILTON: Do you know what discovery is?

THE WITNESS: No. Why don't you help me out with that one. Thank you.

MR. JEKEL: Q. Interrogatories or answers to interrogatories that provide information or more detail about the case at hand.

A. No, I didn't receive any discovery. And I believe there was a complaint somewhere in the pile.
Q. I didn't see it on my quick review, but it's not to say it's not in there.
A. Try Screening, maybe.
Q. We'll go through that in just a minute.

Did you make any notes of your initial conversation with Mr. Hamilton?
A. Everything that I have is on the yellow pages in there. I don't think we spoke. I don't think I made notes based on the initial conversations.
Q. Subsequent to the initial contact with Mr. Hamilton, how many phone conversations have you had with Mr. Hamilton or lawyers for Brown & Williamson?
A. Probably a dozen, mostly having to do with scheduling. Substantive conversations or meetings, a couple, three maybe.
Q. Again, just limiting ourselves to substantive conversations or meetings with Mr. Hamilton or lawyers for Brown & Williamson, can you identify those by date or fairly close to date?
A. Yes. Do you have my billing statement handy?
Q. I do.
A. On June 26th, I met with Fred Hamilton in my office, and he brought with him one of his colleagues, whose name escapes me right now.
Q. Was it your understanding that the colleague with Mr. Hamilton was a lawyer?
A. Yes, it was.
And then I flew out to Atlanta on July 13th for a meeting with several of the attorneys representing

Brown & Williamson.
Q. At the second meeting in Atlanta, in addition to the lawyers for Brown & Williamson, was there anybody else there? Were there other doctors there?
A. There were other potential experts, not at my meeting, but that were filtering in and out.
Q. Did you have occasion to meet any of those people?
A. I met one man who was a radiologist. I don't remember his name.
Q. Was that the only one that you knew?
A. That I met.
Q. Or is that the only medical doctor or potential expert that you met at the meeting in Atlanta?
A. Apparently one of the lawyers was a medical doctor.
Q. Do you remember his name?
A. Mr. Woodside.
Q. Prior to flying to Atlanta, were you given any information as to the purpose of the meeting in Atlanta? Were they going to find out what your testimony was and find out if they really wanted to use you in this case or not?
A. I believe they wanted to explore my feelings about medical monitoring for the class, such as it was,

and decide whether or not it would be worthwhile for them to engage me as an expert.
Q. And we've identified two meetings. You indicated there may have been a third meeting?

A. Yes. Mr. Hamilton flew out to meet with me yesterday.
Q. Is that the extent of the substantive meetings you may have had with lawyers for Brown & Williamson?
A. Correct.
Q. Going back to the June 26th meeting when Mr. Hamilton came out to San Francisco, were you provided materials at that time? By "materials," any materials.
A. I don't think I received anything for the June 26th meeting.
Q. What was the purpose of the June 26 meeting as you understood it?
A. I think it was to decide whether I should be invited to meet everybody else in Atlanta on July 13th.
Q. How long did you meet with Mr. Hamilton on June 26?
A. I think we met for an hour and spoke in general terms about screening and what I thought was available for screening and how I looked at screening in

general.
Q. Okay. Again, any notes that you may have made from that meeting would be in the materials that you brought with you?
A. I don't think there are any, but --
Q. Do you recall, were you provided at the June 26th meeting with Mr. Hamilton any information with regard to the Plaintiffs' proposed monitoring program?
A. I believe I was. I don't think I was handed a specific monitoring program, but I think it was indicated to me that screening with EKG's, chest X-rays, urinalysis -- not urinalysis, EKG's, chest X-rays, sputum cytology, and spiral CT was indicated to me.
Q. And I'm assuming, Dr. Sockell, you have experience in all of those modalities?
A. I had experience in all those modalities or at least some knowledge of them except for spiral CT at the time.
Q. So prior to June 26, 2000, you had no experience in spiral CT scanning?
A. I had no experience or had not read anything about spiral CT, correct.
Q. So in the course of two months, you made yourself an expert in spiral CT scanning?
A. I made myself an expert in evaluating the

utility and medical standard of practice for spiral CT.
Q. Radiologists use spiral CT scanning in their practice, do they not, or they may use it in their practice?
A. Radiologists use spiral CT, and it's usually ordered by general physicians.
Q. Do you think your two-month study in spiral CT scanning has given you sufficient information to qualify yourself as an expert in the effectiveness of that modality as a screening tool?
A. I believe I can make some expert -- give some expert opinions with respect to that, yes.
Q. As it relates to screening for cancers -- or tumors, rather, do you have an opinion today as to the effectiveness of spiral CT scanning?

MR. HAMILTON: I'll object as to form.
Go ahead.
THE WITNESS: Yes, I do.
MR. JEKEL: Q. And can you articulate that opinion for me?
A. Yes. I think today, as we sit here today, spiral CT scanning has not been shown effective in reducing morbidity and mortality from lung cancer.
Q. It's not effective in reducing morbidity or mortality; is that --

A. Correct.
Q. How about in detecting tumors, as it relates to just the detection of the tumor --
A. Correct.
Q. -- is spiral CT scanning an effective modality?
A. Spiral CT scanning is more effective than chest X-ray in detecting tumors of the lung, and chest X-ray is more effective than no X-ray.
Q. Between June 26th and July 13th, 2000, were you provided any materials from counsel for Brown & Williamson?
A. Yes, I was.
Q. And is it safe to say that some of that material is the material that's on this table in front of us?
A. The material that's bound in these fancy binders are what they provided. The material in the loose-leaf binders are things that I either had or asked them to pull for me.
Q. Did you request -- Prior to them providing you any of these materials, did you give them a list of materials that you wanted to see beforehand, before you could make an evaluation of the Plaintiffs' monitoring program?

A. I'm trying to recall exactly what I asked for at the time. I think I asked for the lung cancer screening studies that were done, I think, mostly in the 1980s. I think I asked for anything they had on spirometry. I think I said I needed to read all I could on spiral CT scanning.
Q. Did you tell Mr. Hamilton on June 26, 2000 that prior to that date you had no experience in spiral CT scanning?
A. I may have. I don't recall.
Q. The bound items, can you identify the date on which you received those items?
A. Very shortly after the June 26th meeting.
Q. Okay. And we'll just go ahead and mark Dr. Sockell's billing statements of July 7th and August 14th as Exhibit No. 1. I'd like to mark --
(Whereupon, Plaintiffs' Exhibit 1 was marked for identification.)
MR. HAMILTON: Would it be okay if the court reporter would return the original to Dr. Sockell and we'll substitute a copy?
MR. JEKEL: No problem with that.
MR. HAMILTON: You can return it to me, and I will return it to Dr. Sockell.
MR. JEKEL: This will be Exhibit No. 2.

(Whereupon, Plaintiffs' Exhibit 2 was marked for identification.)

MR. JOHNSON: Q. I'm going to hand you Exhibit No. 2. It appears to be some kind of report of yours dated July 10th, 2000. I'd like if you would to take a moment to review it and identify it for the record, please.

A. This is a report that I wrote the first week in July, first or second week in July, at the request of -- I believe the lawyer's name was Will Barnett. And I was somewhat confused about whether he was working with Mr. Hamilton or got my name from Mr. Hamilton, whether it was the same case or a different case, but I think it turns out to be the Scott case in Louisiana.

MR. HAMILTON: I will just state for the record that I'll represent that your Exhibit No. 2 is, I believe, a report, and as Dr. Sockell testified, generated for the Scott litigation in New Orleans, Louisiana.

MR. JEKEL: Okay.

MR. HAMILTON: And in that regard, I would object to any questioning about this report at this deposition inasmuch as the neither plaintiff's nor defendant's counsel in that case are present.

MR. JEKEL: It covers a lot of the material

that we may cover today, and this looks like something I should have got. That's fine.

THE WITNESS: Yes, you should have.

MR. JEKEL: Q. Do you know Mr. Barnett? Do you know who he represents?

A. I'm not sure, but I believe it's Brown & Williamson.

Q. You get all of the bound materials, and we'll just identify them for the record. I have a bound volume entitled "Labeling."

A. Correct.

Q. What does the term "labeling" mean to you?

A. "Labeling" in a general medicine screen context means identifying well persons or asymptomatic persons with a disease. And it has the connotation that once you attach a label to someone, be it hypertension, heart murmur, that it effects their sense of well-being and health.

Q. So once you label somebody with a disease, it's your opinion that that labeling will affect their well-being?

MR. HAMILTON: Object.

Go ahead.

THE WITNESS: Yes. That's my opinion and my experience.

MR. JEKEL: Q. You don't propose that we not tell people they are sick, do you?

A. No, I don't propose that. But I believe that when you are dealing with asymptomatic persons, healthy persons, before you make the decision to screen for disease, you have to think about the outcome in what you're doing.

Q. Certainly. But let's say I have hypertension.

A. Yes.

Q. And when the doctor tells me I have

hypertension, isn't it possible that the doctor informing me I have hypertension may lead to behavior modification that would allow me to reduce the escalation of hypertension?

A. I think --

MR. HAMILTON: I'll object to the form and caution the witness not to speculate.

THE WITNESS: Could you repeat the question, please?

(Record read by the reporter)

THE WITNESS: Yes.

MR. JEKEL: Q. Can you answer that question, Doctor?

A. Yes, I can answer that.

Q. Very good.

A. There's a couple of things. One is that if I make a proper diagnosis of hypertension, my expert feeling is that it is worth the potential harm of labeling you.

Number two is I need to be quite sure that you have hypertension.

And number three is that in older studies looking at people who were labeled with hypertension, many of whom had white coat hypertension and transient hypertension, there was increased work absenteeism and better self-evaluation of health status.

Q. So is it fair to say, Doctor, that labeling a person with a disease is not always going to have a detrimental effect; is that correct?

A. Identifying the person with the disease should on balance have a positive effect.

Q. Now, there's an index inside of the bound volume.

A. Yes.

Q. And my question to you is did you identify the materials that you wanted to be in this volume, or were these materials that were selected by the attorneys for Brown & Williamson?

A. No. These were people that -- these were

studies that they had collected clearly before I spoke with them and a few of them in my own files.

Q. Let me ask general questions before we move on. This will help. Let's go ahead and mark the Notice of Deposition for today's deposition as Exhibit 3.

(Whereupon, Plaintiffs' Exhibit 3 was marked for identification.)

MR. HAMILTON: Q. Doctor, if you would, please, take a moment to review Exhibit No. 3, paying particular attention to the request for documents.

Have you had an opportunity to review that?

A. Yes, I have.

Q. May I see that for a second? That's the only copy I have.

A. Sure.

Q. Item No. 3 asked you to bring any reports, articles, books, pamphlets or other materials which you have relied upon and have not cited in your expert report in this case. Is it fair to say that the materials we have spread out here on the table represent all of your materials you will rely upon to give opinions in this case that have not been cited in your

expert disclosure?
MR. HAMILTON: Just one second. For the record, I'll note that we did not receive a Notice of

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Deposition for Dr. Sockell. We nonetheless provided him with a copy of this schedule of documents taken from another Notice of Deposition in this current series of discovery. And we have brought to the deposition everything that we thought was responsive to that other exhibit to that other notice.
MR. JEKEL: Yes.
MR. HAMILTON: And then secondly, I'll object to the form of that question.
You can go ahead and answer it if you can.
MR. JEKEL: But earlier, just for the record, Karen Weber on behalf of Brown & Williamson did indicate she received a copy of the Plaintiffs' notice. But again, I don't think that anybody is arguing over that.
Q. And my purpose, Doctor, is to identify today any materials that are not here for which you may rely upon so I can go examine them.
A. I understand. I can't tell you with a hundred percent that every single article that forms the basis of my opinion is in this pile. It depends upon what kinds of questions you ask me and what kind of other things we talk about.
And also, I read about six journals a week, and so things -- I just come across things at times that might be relevant to this case.

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Q. In the Labeling volume, can you identify for me today any of the -- First let me ask, have you read all of the ten articles that are in this bound volume?
A. Yes, I have.
Q. Are there any articles in this -- or tabs in the notebook or bound volume that you will not be relying on that I can just scratch off as you don't need it for your opinions in this matter?
MR. HAMILTON: I would merely suggest at this point if -- Do you know what he means by relying on?
THE WITNESS: Would you define that?
MR. HAMILTON: It may help a little bit, that clarification.
MR. JEKEL: Q. As providing support for the basis of your opinions at trial.
A. I would imagine -- I don't remember the content of each article particularly well. That's one of the first things I read. But I imagine any of these could provide support at trial.
Q. So you're not going to exclude any of the mountainous volumes of materials that we have on the table today as providing support for your opinions; is that fair?
MR. HAMILTON: Object to the "mountainous" reference.

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MR. JEKEL: We can eliminate that from the record.
THE WITNESS: I'm not going to exclude -- and some of them don't support my opinions as well. I wouldn't include those, should I?
MR. JEKEL: Q. Let's go to those first. Can you identify those articles in this volume that do not

support your opinion?
A. I think this volume is pretty unilaterally supportive.
Q. The next volume that I'm looking at is CT Scanning and Lung Cancer. And I like your question better than mine. Are there any tabs in this volume that don't support your position that you can --
A. I believe the key article in this volume is the one by Henschke, Early Lung Cancer Action Project.
Q. I'm sorry. What tab is that?
A. That's tab No. 7.
Q. Tab No. 7.
A. That is probably the seminal article on the use of spiral CT.
I would say that a lot of these other articles point out the improved sensitivity of the CT compared to chest X-ray. Most of the original research Tabs 1 through 7 do that. Most of the abstracts do that

in this volume.
Q. The next volume, it's got two tabs in it, one entitled "Reducing Tobacco Use, Executive Summary. Reducing Tobacco Use, a Report of the Surgeon General."
In glancing through this quickly, I didn't see any notes of yours or any tabs. Did you review those materials?
A. I thumbed through this. I think we cannot rely on this.
Q. Very good. I will not need a copy of this volume. Counsel for Brown & Williamson has agreed to provide Plaintiffs a copy of the materials that are with us here today. But this one I won't need. Thank you.
We've got the two volumes of medical monitoring.
A. Got it.
Q. Articles composed of 37 tabs. Quickly, if there's any articles in the medical monitoring volume that you don't feel support your opinions or are contrary to your opinions, go ahead and identify those for the record.
MR. HAMILTON: I'll object to the extent that there could be articles that would be partially supportive and partially whatever.
MR. JEKEL: Right.

THE WITNESS: Right.
MR. JEKEL: That's fine.
A. I would say all of these article are relevant to my opinion. If you're particularly interested in those that don't support my opinion or have conclusions that don't, I would probably look at the Strauss article, tab 23.
Q. Is that it?
A. That's the -- there might be a few others, but they're probably mixed.
I think Melamed, Reference 4, is pro screening.
Q. You mentioned a term there, "pro screening"?
A. Yeah.
Q. What do you mean by "pro screening"? How would you define that in reference to that article?
A. Someone who is advocating for screening or obtaining chest X-rays, sputum cytology or something

else for asymptomatic persons.
Q. Is that specific to lung cancer?
A. As specific to lung cancer in this case, yeah.
Q. Are you pro screening for any type of disease?
A. I am pro screening for several types of

diseases, yes.
Q. Can you quickly identify the diseases? We'll go more into why a little later.
A. Some of the main ones that we screen for in adult medicines are breast cancer, colon cancer, probably diabetes, vision in the elderly.
(Background noise from phone connection)
Q. Go ahead, Doctor.
A. Cervical cancer.
Q. Cervical cancer.
A. Hypertension. I screen now for hypercholesterolemia.
Those are the main ones. A few others I will.
Q. We'll come back to that.
A. Sure.
Q. I'm going to hand you a copy of the report of the U.S. Preventive Services Task Force, Second Edition, "Guide To Clinical Preventive Services." You have a couple of tabs in here. Really, what I'd like to do is identify the areas and chapters in the book for which you will be relying on so we can eliminate having to copy the whole book.
A. I relied on the Methodology section, II.
And I relied on the section on screening for

asymptomatic coronary artery disease.
I relied on the section on screening for neoplastic diseases.
Occasionally, I look something up in this book randomly.
Q. Generally speaking, those were the three sections of the book that you're relying on for purposes of your disclosure and your testimony in this matter?
A. Correct.
Q. And we'll limit our request for copies of this book to those sections.
The black bound volumes with the orange, again, you indicated that some of these were materials you had; some were materials you requested from Mr. Hamilton's office. Is that correct?
A. Correct.
Q. Who physically bound them?
A. My secretary and myself.
Q. Did you bind them specifically for this case, or is this for your general practice as well?
A. This is specifically from this case.
Q. And the groups, you have them broken into Screening, Surgeon General, Pulmonary and Cardiology; correct?
A. Correct.

Q. In the Screening volume, there are sets of some handwritten notes, and I just -- what's the substance of those three-page handwritten notes?

A. The substance of these are general principles of Screening, including sensitivity, specificity, and predictive value as it relates to the prevalence of the disease. I calculated the predictive value of spiral CT scan based upon Dr. Henschke's study and calculated again for a lower prevalence of disease. And then I wrote down the six things to do for a screening test that are required for an effective screening test.

Q. Okay. I'm sorry. Were you finished?

A. One more, I think.

Q. I'm sorry. Go ahead.

A. And then I have a brief section here, is Why is evangelism misplaced.

Q. What do you mean by that statement, "why is evangelism misplaced"?

A. It's very appealing to find -- to catch a disease early and to intervene. And it gives one a feeling that one has done the patient tremendous good. That's a statement that pertains for certain states such as the ones I mentioned before: hypertension, breast cancer, cervical cancer, but doesn't necessarily pertain for other cases. And the reasons for that are listed in

that section.

Q. Okay. We'll go over those in just a minute. I want to go back to the second page of those handwritten notes. You said you did a calculation based on the Henschke article?

A. Correct.

Q. And precisely, what was the calculation designed to determine?

A. The calculation was designed to determine in the population she studied what the predictive value of a positive test was.

Q. Can you just define for me how you're using predictive value?

A. Right. Predictive value is the clinically most important concept when you do a test, in the sense that if I do a test on you, I would like to know what are the chances of that test indicating true disease.

Q. All right. Now, you said your calculation came up with a lower prevalence; is that right?

A. No, no, no.

MR. HAMILTON: Objection.

THE WITNESS: Let me clarify it.

The prevalence of disease in this study was 2.7 percent. And these were self-selected 67-year-old people from New York with a 45-pack-year history of

smoking and a 14 percent exposure to asbestos. It felt a little high to me, and so I recalculated the predictive value using the data from Sone in January, who did a population-based screening for lung cancer. The prevalence of disease in his study was about .5 percent in both smokers and nonsmokers.

MR. JEKEL: Q. Okay. So the significance of calculation in terms of the West Virginia medical monitoring class, what is the significance?

A. When you determine the predictive value of a test, there's two things you need to know. One is the accuracy, which is essentially sensitivity and specificity. And the other number you need to know is the prevalence of the disease. So given a -- with a

given sensitivity and specificity, your predictive value decreases with decreased prevalence.

Q. But the 2.7 percent that was found in the article, that has no relationship to what we're doing in West Virginia, does it?

MR. HAMILTON: Object.

Go ahead.

THE WITNESS: What you need to know in West Virginia is for the class for whom you want to recommend monitoring, what is the expected prevalence of the disease. And to be frank with you, I don't have a

really good handle on what the class is. I don't know if we're starting with 25-year-olds, in which case the prevalence would be extremely low. I don't know if we're doing five-pack-year history of smokers. I don't know the distribution. All I know is based on the Henschke data, if the class is similar to her patients, which are 67-year-old people with a substantial smoking history, substantial asbestos exposure, then we would expect a prevalence of 2.7 percent. If we were including ex-smokers, 25-year-olds, five-pack history smokers, I would assume the prevalence would be much closer to a population-based study such as the Sone article.

Q. Is it your understanding that the Plaintiffs' experts in the Blankenship case are using the 2.7 percent prevalence rate?

A. I don't know what they're using.

Q. Okay. Another document we see in the -- It's a table.

A. Yes.

Q. It's got Attachment C on there.

Go ahead.

MR. HAMILTON: For the record, I think that this is an exhibit to the Scott report that was identified earlier, and I would restate the objection as

I stated earlier about that.

MR. JEKEL: It's in the material Dr. Sockell is relying on. If you don't want me to ask him questions about it, I won't.

MR. HAMILTON: Well, my objection is really the fact that this pertains to another piece of litigation. You may be able to ask him --

MR. JEKEL: Which your firm represents the same client, but that's fine.

MR. HAMILTON: Actually, for the record, our firm does not represent that client in that litigation. So I renew my objection.

MR. JEKEL: Very well.

THE WITNESS: Can I speak?

MR. JEKEL: I just asked about the chart. I'm not going to get into the substance of the report.

THE WITNESS: The chart is essentially what I have, I just explained I have.

This is the same chart, cleaned up. It's a way of showing that if the cancer prevalence changes, a test with the same sensitivity and specificity has a lower predictive value. So in this case, if the cancer prevalence is 1 percent, you have an excellent sensitivity and specificity of --

(Reporter interrupted)

May I repeat that?

If the cancer prevalence is 1 percent and the test has a sensitivity and specificity of 90 percent, which is excellent, then the predictive value of a positive study is 8.3 percent. If on the other hand the cancer prevalence is 0.1 percent, the predictive value falls to .9 percent.

MR. JEKEL: Q. And the bottom line with that is that if the prevalence rate is low, then there may not be much benefit in doing the screening; is that fair?

A. It increases the false positives and would increase the harm of the screening, not necessarily decrease the benefit, but increase the harm.

Q. Okay. And then the handwritten notes that appear behind that, do these just make up the various figures that you used?

A. Yes. This is my -- This table tries to summarize the upsides and downsides of screening in a pithy way. And if you do a test, you have four possibilities: You have a true positive, true negative and so forth. And I go through --

Q. So the T means true positive; the N is negative; the FP is false positive; FN is false negative?

A. Correct.

Q. And this is --

A. Its upside.

Q. And downside?

A. Correct.

Q. And what is on the very top? You have a box. What is this supposed to represent?

A. This way?

Q. Yes.

A. This is a disease positive, cancer positive, cancer negative.

Q. Okay.

A. And on the vertical axis, test positive, test negative.

Q. Test positive under that just tells you --

A. It's a two-by-two table.

Q. Right. Right. Right.

A. Okay.

Q. And so I understand, in determining whether we want to screen for lung cancer, what we really need to do is do a benefit-harm analysis of the upsides and downsides; right?

A. Correct.

Q. And did you create this chart, the upside and the downside, as it relates to the screening program the

Plaintiffs have proposed in this case, or is this just a general for lung cancer?

A. This is a general for any screening maneuver.

Q. Any screening maneuver, okay.

Have you attempted to apply this analysis to the screening program that the Plaintiffs have proposed?

A. I've used some principles in this to determine my opinion.

Q. I just want to make sure I can read all of these notes real quickly.

A. I believe, Counsel, that it's an attachment -- no. Yes, it is an attachment, Exhibit D, in the report.
Q. The other report, all right.
Did you discuss -- Was this done before you were retained in this matter; do you know?
A. No. Actually, I did this the day that I -- I did this in this form the day that I went out to Atlanta, which was July.
Q. 13th?
A. 13th, right. On the airplane.
Q. And then you came back and typed it up?
A. Yes. I liked it.
Q. And the last page -- or this isn't the last page. The next page in those notes, can you just read

the heading?
A. This is a summary of the NCI trials and summary of the Mayo trial.
Q. And the NCI trial, that was a lung cancer screening?
A. Yes. There were three arms of the trial: a Johns-Hopkins, the Memorial and the Mayo.
Q. Very well.
What have you put in here, just a summary of their results?
A. Yes. The design and results.
Let me take that book.
Q. Go ahead.
A. I put a summary of the design, and I put the results in only for the Mayo.
Q. Okay. And that makes up -- I'm just moving to the next page, NCI Trial Summary. Again, this is just the Mayo data?
A. This is the lead investigator, the Mayo trials, summarizing all three.
Q. Then you've got the Czecho -- the Czech trial?
A. The Czech trial, yes.
Q. Bibliography?
A. Right.

Q. What do you have there next to the parenthetical?
A. That's here?
Q. Yeah.
A. Those are the words intended to indicate additional items.
Q. All right. The additional items that you've listed here, is this something that you provided to counsel for Brown & Williamson and said "I'd like a copy of these materials," or did you go out and get those on your own?
A. These are things I had on my own.
Q. You had on your own?
A. Yeah. This group I got from my files.
Q. And this group, the additional items, are they here today?
A. Yeah. They're probably disbursed through the various orange binders.
Q. Okay. In the NCI trials and the Mayo trials, what modalities were they using in detection of the lung cancer?

A. In the NCI trials, they were using chest X-ray and --

TELEPHONIC VOICE: Adam Miller, Thompson Coburn, St. Louis, subbing in for Carl Rowley.

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MR. HAMILTON: Adam, it's Fred Hamilton. The court reporter has done a roster and has everyone's affiliation. Could you state for the record then who you represent?

MR. MILLER: Sure. Lorillard Tobacco Company.

MR. HAMILTON: Thank you.

MR. JEKEL: It's a little warm in here, isn't it?

Q. I'm sorry. Doctor, we were talking about the modalities that they used for the detection of the lung cancer in the NCI and the other trials.

A. Yes. These four prospective trials were using chest X-ray and cytology as screening modalities.

Q. Okay. None of those trials utilized the spiral CT scan?

A. That is correct.

Q. Are you familiar with a PET scan, P-E-T, scan?

A. Yes. I know something about it.

Q. Is that the same as the spiral CT scan?

A. No, it's not.

Q. None of the three trials, or the trials that you've identified there, did they use either of those methods?

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A. That's correct.

Q. Do you believe that the results may have been different in some degree had any of those trials utilized the PET scan or the spiral CT scan?

MR. HAMILTON: I'll object. It calls for speculation. You can answer.

THE WITNESS: I think that is speculative at this point in time. I think there's no doubt that you find more tumors with the spiral CT scan, and I have not seen any PET study where PET is the primary screening modality.

MR. JEKEL: Q. What about when used in connection with each other? That's chest X-ray, sputum -- or chest X-ray, cytology, and the CT scans. Did any of the trials that you're referring to use all three of those modalities?

A. No.

Q. Do you have an opinion as to whether you will detect tumors earlier in smokers with at least a five-year pack smoking history after the age of 40 using a combination of all three of those modalities as opposed to just one?

A. May I repeat your question to make sure I understand it?

Q. Yes. Go right ahead.

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A. In smokers with a minimum of five-pack-year history --

Q. Yes.

A. -- at least age 40, you're asking me would the number of tumors you detect utilizing a combination of chest X-ray, PET scanning and spiral CT be more than

any one modality by itself?
Q. Yes.
MR. HAMILTON: I'll interpose an objection insofar as that doesn't represent the proposal as we understand it.
But go ahead and answer.
THE WITNESS: I'm thinking.
MR. JEKEL: Okay. That's fine.
THE WITNESS: I think I already testified that spiral CT finds more tumors than chest X-ray. I'm not off the top of my head sure whether PET scanning adds to detection or just helps define metastatic disease in someone with a positive CT scan.
MR. JEKEL: Q. Okay. With that as a foundation, would the use of the chest X-rays and the CT scanning in your opinion, if we started at age 40 with a smoker with a five-year-pack history, do you have an opinion as to whether the use of those modalities would detect the tumors in these individuals at an earlier

date as opposed to using just the X-ray, for example?
MR. HAMILTON: I'll object and in part due to the five-pack-year designation, which I think may be ambiguous.
But go ahead and answer it if you can.
THE WITNESS: Can you define for me what the average person in this group is? For example, if we have 90 percent five-pack-year smokers --
MR. JEKEL: Q. As opposed to --
A. I'd say --
Q. No?
A. No.
Q. So in order to answer the question on whether the tumors would be detected earlier, you would need more information on the true range of the smoking history of the population to be examined?
A. Yes. I think I need to be able to define the class, which I haven't been able to do.
Q. Do you have an opinion as to at what level of smoking history the use of the X-ray and the CT scanning would detect tumors earlier in their progression in individuals over 40?
A. Can I check something?
Q. Sure.
A. Would you mind? Just give me an hour here.

I'll be right back.
Q. This is all your stuff.
MR. HAMILTON: Will you be a minute?
MR. JEKEL: Yeah.
MR. HAMILTON: I'd like to use the bathroom. We'll be off the record for a minute, for just a minute, while he's locating something.
(Recess taken from 10:12 to 10:16 a.m.)
MR. JEKEL: Back on the record.
Q. Doctor, were you able to locate the information you were looking for?
A. Yes. It's an article by Sone, S-O-N-E, in THE LANCET, 1998. And in his study, on this population-based screening with spiral CT scan, in ages 40 through 73, he doesn't give a mean age, but it does look like the CT scan found many more tumors than the chest X-ray.

Q. Right. And we were talking a little bit about the smoking history that might be an average before you would have that effect. And my question is, do you have an opinion as to what type of smoking history an individual would have before the use of CT scanning in an age group of 40 to 73 would detect more cancers -- or more tumors, I'm sorry.
A. Would you ask that again? I'm sorry.

Q. Do you have an opinion as to whether a prerequisite smoking history is necessary before you would get the results that were found in the Sone article?
A. Well, in the Sone article, the prevalence of tumors was the same in smokers and nonsmokers, 0.5 percent, thereabouts, so it would seem not to matter.
Q. Okay. My next question -- or another question that I asked was, is the use of the CT scanning when they detect tumors, are they detecting them at earlier stages?
A. With chest X-ray and CT scan, you detect -- the tumors that you diagnose are earlier.
Q. Then let's see. The additional items, I think we went through all of those notes. I think we went through all of these. I'm just going to put these back where they belong.
This is again from the Screening bound volume. It was in the pocket part. If you would read the top of that page for me.
A. December 3rd, 1991?
Q. Yes.
A. "Minimal screening guidelines for asymptomatic adults."

Q. What is the source of that document; do you know?
A. That's something I put together with my division at Valley Medical Center in 1991 for our clinic.
Q. So that's based on research from St. Mary's?
A. This is from Valley Medical Center in San Jose.
Q. Valley Medical Center, I'm sorry.
That's the only source of the data that makes up the report?
MR. HAMILTON: Referring to the report that the witness is looking at?
MR. JEKEL: Yes, in his hand.
THE WITNESS: This was a guideline that we developed for asymptomatic persons in our clinic. And the pages that are in this are some relevant information, but this was the standard that we set up for the clinic at that time based upon our review of the literature.
MR. JEKEL: Q. Can I take a look at that?
There were some handwritten notes in the back pocket part of the binder. Just take a moment to look at those. And basically, I want to know what information is included in your handwritten notes.

A. These were some notes on some of the articles before I got overwhelmed by the volume.

Q. So you started taking notes on the articles before you were overwhelmed with the volume of the articles; is that fair to say?
A. That's fair to say.
Q. Again, this is referring to the December '91 data that you put together, minimal screening guidelines?
A. Correct.
Q. I'm looking at page 7, Breast Cancer. It's got Kent --
A. Kent Imai.
Q. -- Imai, M.D. Is he somebody that you worked with on this?
A. Yes.
Q. And the source, Dr. Eddy?
A. Uh-huh, yes.
Q. I'm looking at your December 3rd, 1991 data. And you've got under Screening, "Test points to remember." And there are three of them. And I think we've talked a little bit about Item No. 1 that we'll do a little more here. Item No. 2, if you would read that for the record, please.
A. Yes. "Even very good tests when used for

diseases with low prevalence result in low positive predictive values. That is to say, large numbers of false positive tests are very costly to work up."
Q. Then item No. 3?
A. "We can increase prevalence," in quotes, "by targeting high risk groups."
Q. So when we take Items No. 2 and 3 together, if we more rigidly define the population for which we screen, being that group most at risk, then our good tests will have more usefulness?
A. The higher the prevalence of the disease, the better the predictive value. So if there were any utility, which I don't think there is, to spiral CT, it would be more easy to demonstrate in 65-year-old smokers with a 45-pack-year history than in 40-year-olds with five-pack-years.
Q. You had said there was no utility in spiral CT scanning?
A. No utility. I would say "net benefit to patients that's yet proved." I mean, rephrase that.
Q. So I just want to make sure I have your opinion correct. Is it your opinion, Doctor, that as part of the medical monitoring program Plaintiffs are proposing in the state of West Virginia, that you believe the spiral CT scanning should not be used?

A. I don't believe it should be used as part of a program because it's not yet established to improve patient outcome.
Q. But earlier, you talked about the Henschke, H-E-N-S-C-H-K-E, report?
A. Right.
Q. And you would agree with me, Doctor, that Henschke found that low dose CT can greatly improve the likelihood of detection of small non-calcified nodules and thus of lung cancer at an earlier and potentially more curable stage?
A. Yes. I agree with both of those two statements. And it is very confusing. If you look at

the NCI studies and the Czechoslovakian study, they found that cancers were detected at an earlier, more resectable and more curable stage, yet in all four studies, mortality was not improved with the screening maneuvers. So it's not inherently clear that because you find a disease early, that you're doing something good. And that gets to the issues of bias that I had spoken about that I'm sure was on your list.

Q. So -- and I don't mean to be too simplified, but the bottom line for you is until the Plaintiffs in West Virginia can demonstrate that the screening program is going to reduce mortality, you don't think it's going

to have any net benefit; is that fair?

MR. HAMILTON: Object.

Go ahead.

THE WITNESS: I would not propose it. I think that we have not looked at the downsides yet of doing that kind of screening. And the upsides have not been proved. And we are doing a program that's not -- how should I say it? You coming to the doctor and asking for help for something. We are doing an outreach program. I think it's morally incumbent upon us to know that we're doing some good.

And finally, there's no doubt that helical CT is going to find more early lesions, but our experience to date with lung cancer screening is that finding earlier lesions has not led to decrease in mortality.

MR. JEKEL: Q. Again, I'm in the Pulmonary notebook, and I just wanted to -- There were some handwritten notes at the back of that. I just want you to take a minute to look at those and see if you can identify what that --

A. One page is something we discussed before, which were some notes to calculate the positive predictive value of helical CT scanning.

Q. Okay.

A. And the other is notes on a NEW ENGLAND

JOURNAL article on PET scanning, in which I calculated the positive predictive value of PET scanning for positive mediastinal nodes.

Q. What were those figures? Back up. What was the population in which you ran this calculation for?

A. This was the population that was reported in the NEW ENGLAND JOURNAL article.

Q. Would it be in this notebook?

A. Yes. That would be in the Pulmonary binder, I believe.

Q. Very good, and that's where it was. I don't know. Do you need to refer to the article? But it's the population that was identified in that article?

A. Correct. And the article was written by -- Let me see. Here it is. Pieterman, P-I-E-T-E-R-M-A-N.

Q. It's the July 27th, 2000 issue of the NEW ENGLAND JOURNAL OF MEDICINE?

A. Correct.

Q. And did they not make that calculation in the article themselves?

A. They made it themselves for positive predictive value, yes.

Q. And was your calculation the same as theirs?

A. Yes. Always checking.

Q. All right. I just wanted to -- and I'll put

those back.
Have we talked about this one?
A. Yes.
Q. You have three or four questions at the bottom handwritten notes. I can't make those notes out.
A. Right. There's a couple of questions I had about a study.
Q. This is the Pieterman study?
A. The Pieterman study. One is, If your positive predictive value is 75 percent, then you still need to operate on the patient because there's a 25 percent chance he or she may have a resectable lesion.
The specificity in the Pieterman study was 86 percent, which is pretty good. And I was wondering about what the specificity would be in West Virginia because histoplasmosis is fairly common there. And I believe there are other -- Well, let me just say histoplasmosis is common there.
My other question was, How will this technology perform in a community-based setting? If we're doing it on -- well, let's say if the class is 300,000 members and we have 20 percent positive CTs, that makes what? 60,000. Doing 60,000 PET scans might really lead to lower performance characteristics.
And my final question was, How do you

actually utilize this in the clinical setting? If someone has clinical Stage I disease, or Stage IIA, you would probably go ahead and operate, and the PET scan in general won't dissuade you from doing that.
Q. Now, once you get a positive CT scan of any sort as it relates to a tumor in the lung, before you would go ahead and operate, wouldn't you recommend getting a tissue sample, a needle biopsy, something of that nature?
A. It depends on the setting. I think it depends on the pretest probability of the lung cancer being a tumor. An older smoker with a four centimeter tumor of the lung is undoubtedly lung cancer and should probably undergo an open procedure.
I think the issue with PET scan is you cannot operate on certain people who appear to have Stage I disease by CT scan. I think that's the role for it.
Q. All right. But in that situation, you would need -- I just want to make sure I understand you. You'd need to do something else to make sure you're operating on somebody who didn't have a lung cancer?
A. Again, it depends. If it was someone your age who doesn't smoke, I would assume the pretest probability of being cancer is very low. So you would either follow it, or if we were very nervous, maybe we

could do a biopsy and see. In many older smokers, it's not unreasonable to perform the biopsy and be ready to do the resection.
Q. Did we go over all the questions? Have we identified them all?
A. Correct.
Q. Okay. Now, we have some deposition testimony --
A. Yes.

Q. -- in your material. Have you read all the depositions here?
A. I believe I have, yes.
Q. You've got Deposition of Dr. Burns?
A. Correct.
Q. Do you know Dr. Burns?
A. Not personally.
Q. Have you seen his reports that he has prepared specific to this litigation?
A. I've seen his reports, yes.
Q. I did not see them included in your materials unless they are somewhere --
A. I think they're at the end of Medical Monitoring Volume II.
Q. Okay. They're all actually in the bound volume that was provided to you by counsel for Brown &

Williamson?
A. Yes.
Q. Dr. Spagnolo?
A. Spagnolo, yes.
Q. Do you know Dr. Spagnolo?
A. No.
Q. Again, Michael Burns. There's a couple of notes in Dr. Burns's deposition that I'd like to go over.
A. Sure.
MR. HAMILTON: For the record, you should probably identify which deposition.
MR. JEKEL: Yes. I'm sorry. This is April 12th, 2000, Michael Burns, Volume I.
Q. There's one. You've got the -- This is referring to page 35 and 36 of his testimony there?
A. Yes.
Q. You've got a little note that says "not true." I'm assuming that note references Dr. Burns's statements regarding some California data?
A. I don't think it's true that -- Let me change that. I believe that EKG's are covered by insurance companies if the physician thinks it's indicated in California.
Q. All right. And it is his answer that you put

the note on page 35, beginning at line 22, and his answer then continues on to page 36 through line 11. And you believe that page 36, lines 2 through 4 is incorrect?
A. Yeah, I believe so. And I think that there is payment for cervical cancer, breast cancer, colon cancer in my experience.
Q. On the preceding page, a note was covered up. What does this say?
A. This says "Asked Manny to check." I don't know what that is. This might have been counsel's original copy.
Q. Okay. Is that your handwriting?
A. No.
Q. It is not.
And the Castano case reference?
A. No.
Q. You covered it up because it wasn't your comment?
A. I covered up what was covered up.

Q. Was it highlighted when you received it?
A. I don't believe this was the copy that I was intended to get.
Q. So the one that you got was highlighted; is that fair?

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A. This is not my highlights, I believe.
Q. Do you believe that counsel for Brown & Williamson was trying to draw your attention to certain deficiencies or problems they had with Dr. Burns's testimony in providing you with a prehighlighted copy?
MR. HAMILTON: I'll object.
THE WITNESS: I actually think that they gave me two depositions, one of which I noticed was their copy, and I think it was an error. But I can't speak to their modus operandi.
MR. JEKEL: Q. Let me do that.
A. Yes. It's your job.
Q. With regard to this same -- the highlighting question, the bound materials that were sent to you by counsel for Brown & Williamson, were any of those materials prehighlighted before they came to you?
A. No.
Q. But these stickees on here, those are your notes?
A. Those are my scratches.
Q. Okay. Thank you. Let's put these aside.
These were in the materials loose, and I just -- if you could categorize -- let's go to the Tumor Size article.
A. Right.

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Q. Where does that fit in either -- by topic, if you would? Screening, Surgeon General, Cardiology, Pulmonary?
A. Oh. Let's put it into Pulmonary.
Q. Let's put it into pulmonary, okay.
MR. HAMILTON: For the record, you might want to identify it by author or something.
MR. JEKEL: Yanagi, Y-A-N-A-G-I. I'm sure I pronounced that improperly, but it's from the ANTI-CANCER RESEARCH, Volume 20, year 2000. I am placing it in the pocket part of the Pulmonary binder.
Q. Let's go to Medical Monitoring Volume II of II, bound materials. This is tab 36, Revised Report of David M. Burns dated 2/3/2000, page 11 of that report. You have a tab and some notes?
A. Yes.
Q. And if you would, does your first set of notes refer to paragraph 22 of the report?
A. Correct.
Q. And how do these notes -- How do we connect those notes to Dr. Burns's report?
A. Dr. Burns writes that "The risks to the proposed class members are great because cigarette causes" -- "cigarette smoking causes 85 to 90 percent lung cancer, one-third of heart disease, and 90 percent

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of chronic obstructive lung disease that occurred in the United States." And he referenced the DHHS publication that gave some different figures.
Q. All right. Well, let's go over the difference in figures. The first value he has in there,

"cigarette smoking causes 85 to 90 percent of the lung cancer." Is that accurate?
A. Yes, that's accurate. It's 87 percent according to the Surgeon General's report. Lower in women, higher in men.
Q. Okay. One-third of heart disease?
A. The Surgeon General reports 21.5 percent.
Q. That's more like one-fifth?
A. Yeah.
Q. And the date of the report is -- Are you aware of other data, Doctor, that would suggest that cigarette smoking causes one-third of heart disease in the United States?
A. No, I'm not. 20 percent was about what I had heard in general reading and paying attention. So I checked that.
Q. And then cigarette smoking causes 90 percent of the chronic obstructive lung disease. Is that figure accurate?
A. 82 percent.

Q. Were there any other notes in that paragraph?
A. I wrote -- also, from that report, the Surgeon General's report, I wrote down that 99 percent of the deaths in 1985 attributable to smoking occurred in individuals who had started smoking before 1965. So that people who started smoking after 1965 had a very, very low risk of attributable mortality from smoking.
Q. And what data -- That's from the same report?
A. Shall I find that for you?
Q. That's the citation No. 20, "The Health Consequences of Smoking, 25 Years Progress"?
A. Yes.
Q. That's a 1989 volume?
A. Try page 157 on that. I believe that's --
Q. That's okay. What I'd like to ask you, though, is in 1989, the Department of Health and Human Services -- people who started smoking after 65 are just 24 years old. Would that be right?
A. No, no. You have to have a 20-year history of smoking to incur significantly increased risk.
Q. Right. But you indicated that that report showed that 99 percent of the deaths in 19 -- I guess it was '89.
A. '85.
Q. '85?

A. Yeah.
Q. -- were people who started smoking prior to 1965?
A. Correct.
Q. Not that they were born then?
A. Right.
Q. And the significance of that was that people who started smoking at 1965, by 1985 they only accounted for 1 percent of the deaths?
A. Correct.
Q. Isn't that more a function of that we didn't look at that population long enough to determine whether people who started smoking after 1965 did in fact die?
A. My inference from that is that the -- maybe this is the wrong word -- latency for mortality caused by smoking is around 20 years.

Q. So they were just at the 20-year period. I mean, do you think that data alone can make you opine that people who started smoking after 20 years with a 20-year smoking history are not at risk of dying from their smoking?
A. No, but --
MR. HAMILTON: Object.
THE WITNESS: This gets to our multiple prevalence discussions that the prevalence of the

disease is going to take an upturn at 20 years of smoking. And so that's where if you're going to screen, you would be most effective.
MR. JEKEL: Q. Does the amount of cigarettes smoked per day or per year come into that, or is it just -- is it a 20-pack-year history or 20-year smoking history?
A. That's a very good question.
Q. I got one.
A. One of many very good questions.
Q. Right.
A. Certainly one cigarette a day for 20 years would have not much of a risk. And three packs a day for ten years probably has more of a risk. It's very hard for me to give you an expert opinion about that. And I've actually looked for that answer, and I couldn't easily find it.
Q. Do you have your own opinion about the -- about what the smoking history needs to be before the prevalence of --
A. Yeah.
Q. -- disease at 20 years will take the upturn that you suggested?
A. My own opinion is that -- I could be a little off in this. Most chronic smokers smoke about a pack a

day or so. So I would think that looking at the median smoking history, I would say a pack a day for 20 years puts you into this higher prevalence category.
Q. Okay. And earlier, we looked at your notes that say even good tests may have problems because of the prevalence, but if we look at the higher risk, those good tests may have some more utility. Would this prevalence that we're talking about here, the 20-year history of a pack a day, if we were just limiting it to that group, would the CT -- or the spiral CT scan in your opinion have a benefit?
MR. HAMILTON: I'll object to the extent that it misstates the prior testimony.
Go ahead.
THE WITNESS: It's more likely to demonstrate a benefit in the people with the 20-year history of smoking. It is more likely. Whether it does or not, I don't have an opinion because it has not been proved.
MR. JEKEL: Q. You have some other -- Were those the only notes on that page?
A. I wrote something here. I don't know. Oh, I think 90/79 is referring to men versus women. Women seem to have a lower attributable risk.
And this says less than 65 and over 65 for -- I believe it's heart disease.

Q. The notes at the bottom of the page, have we

discussed those?
A. Yes, we've discussed all that.
Q. Let me see this one more time.
I note that in the materials that were provided to you by counsel for Brown & Williamson they only provided you one expert report -- or there's several versions, but Dr. Burns was the only Plaintiffs' expert for which you were provided reports for. Is that fair?
A. I have received --
Q. There was one other report?
MR. HAMILTON: Let me just object because I think that Dr. Burns has filed just one report in this case. I believe that to be a correct statement. And although there are other Plaintiffs' experts, there are no reports from those experts in this case.
But with that caveat, you can answer if you can.
THE WITNESS: Okay. I was a bit confused between Louisiana and West Virginia, not because I don't know my geography, but in terms of where I was receiving things from. I got a report from Neil Benowitz.
Dr. Benowitz: Is he involved in this case?
MR. JEKEL: Not to my knowledge.

THE WITNESS: Okay. It must have been the other one. I got one other report by a psychologist that worked with Dr. Burns. I'm not sure if this was in this case as well. Hennington. I think having to do with addiction.
MR. JEKEL: Not to my knowledge.
THE WITNESS: Okay. That's it.
MR. JEKEL: Q. We'll get back to that in just a minute. I'm going to go ahead and mark as Exhibit 4 a copy of what I'll term your expert disclosure.
(Whereupon, Plaintiffs' Exhibit 4 was marked for identification.)
(Beeper sounds)
MR. HAMILTON: Do you need to answer the page? Go ahead.
MR. JEKEL: We'll take a short break off the record. The doctor was just paged, and it may allow somebody on the phone who needs to get up for whatever reason.
TELEPHONE VOICE: Can we plan on ten minutes then?
MR. JEKEL: I would not plan on ten minutes at all.
TELEPHONE VOICE: Can we plan on five?

MR. JEKEL: Five.
(Recess taken from 10:51 to 10:56 a.m.)
MR. JEKEL: Let's go back on the record.
Q. We are back. We've marked as Exhibit 4 an expert disclosure.
A. Yes.
Q. Have you had an opportunity to review that?
A. Yes.
Q. Now, this isn't a document that you prepared, is it?
A. Mr. Hamilton wrote this.
Q. Okay. Were there prior drafts of this

document?
A. No.
Q. Did you have discussions either on -- Let me ask you this: Do you know what date that was prepared?
A. No, I don't.
Q. Do you know if this was in existence prior to your meeting in Atlanta with the Brown & Williamson folks?
A. I don't know when Mr. Hamilton wrote this, but I presume it was very recently.
Q. Did you review anything like this in Atlanta with the lawyers?
A. I believe most of the areas that are covered

here were discussed in the Atlanta meeting.
Q. I did note there was one pen mark --
A. Yes.
Q. -- on there. And I believe it's in the bottom of the first paragraph.
A. Correct.
Q. Does that need a correction?
A. Yes.
Q. Okay. And what would that correction be?
A. We don't have 25 -- 75,000 residents; we have 25,000 visits.
Q. So that sentence should read, "He also is the Director of Ambulatory Care for St. Mary's Medical Center in San Francisco, at which he has designed and directed a medical screening monitoring program for 25,000" --
A. -- "for a clinic that serves 25,000 visits."
Q. Okay. With that, are there any other corrections that need to be made on that report?
A. No. I am in agreement with it.
Q. Is there any portion -- you probably want that out. I think we'll refer to it again.
How much of your current clinical practice -- I believe I saw something in what we marked as Exhibit No. 2 that you indicated 50 percent of your current time

is devoted to clinical and another 50 percent to teaching, research, administration. Is that still accurate?
A. Correct.
Q. Of the 50 percent of your clinical practice, how much of that is devoted to internal medicine, if you can make these --
A. Internal medicine as opposed to?
Q. Geriatric medicine.
A. Oh.
Q. Understanding that there may be some bleedover.
MR. HAMILTON: I would object to the extent that maybe those are not mutually exclusive categories.
But go ahead and answer if you can.
MR. JEKEL: Right.
THE WITNESS: It's very hard to say. A lot of the hospital work goes with folks over 65; less of my outpatient does. But it's all internal medicine to me.
MR. JEKEL: Q. The outpatient work that you do, is that not confined to individuals over 65? You see more younger people there?
A. My population is a little younger in the

outpatient.
Q. And where do you perform your outpatient

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work?
A. I perform it at the hospital-based clinic at St. Mary's.
Q. So it's all at St. Mary's?
A. Correct. I'm sorry. I'm not in private practice.
Q. Okay.
A. I'm a hospital employee.
Q. Of St. Mary's?
A. Yes.
Q. How long have you been a hospital employee?
A. Of St. Mary's?
Q. Yes, St. Mary's.
A. Almost six years.
Q. Is there a copy of your C.V. somewhere in that group? I know it's probably attached to that.
A. It's in that.
Q. I have a copy. I just want to make sure --
MR. HAMILTON: What we might want to do with that, you've not asked any questions about Exhibit 2, and I presume that's based on my objections to that. And I have no objection at this point if you'd like to detach the report prepared for the Scott case and substitute just the C.V. of Dr. Sockell as Exhibit 2. Just a suggestion.

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MR. JEKEL: I don't think it's necessary.
MR. HAMILTON: Okay.
MR. JEKEL: I assume he knows what's on his C.V. I'm most interested in determining whether there are additions or deletions to the C.V.
Q. I give you that just so you have reference, whether -- you can tell me if there are any more articles or abstracts that you're working on that may be in print that aren't referenced on the C.V.
A. There is one recent publication on collaborative practice in primary care.
Q. Actually --
A. That was in the abstract form. That's been published now.
Q. Why don't we go ahead -- Don't refer to that.
We'll mark this as 5. Refer to that one.
(Whereupon, Plaintiffs' Exhibit 5 was marked for identification.)
THE WITNESS: That's in here?
MR. JEKEL: Q. That one says it was revised, I believe, June of 2000, that C.V.
A. Yes. Actually, the last abstract has been published, and I recently published an article on geriatric depression.
And I stopped adding presentations to the

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C.V., I do them so often.
Q. Any notes that are on the copy of Exhibit 5 that are marked would be my notes and not necessarily those of the witness.
A. Is that a question?
Q. No. Just a clarification.
A. Right.
Q. But if you'll let the reporter mark that.

A. Sure.
MR. HAMILTON: Are you going to keep Exhibit 2?
MR. JEKEL: I am going to keep Exhibit 2. I may have some questions on it, but nothing substantive. I was surprised it was in all the materials you let me look at. But that's all right.
Q. Doctor, the C.V. that we have there, my review of it, I did not see any articles or research that you personally have been involved in that relate to smoking and/or health consequences of smoking; is that fair?
A. No, I have done no research on that.
Q. In your practice, do you treat people with lung cancer?
A. I treat them. You mean surgically or with chemotherapy or radiation therapy?

Q. Either of those, any of those?
A. No, I don't use those modalities, but I'm involved with patients with lung cancer often in the diagnosis, helping the workup, or comfort measures, and involved with their other medical problems.
Q. You are not an oncologist, are you?
A. No, I'm not.
Q. You are not a radiologist, are you?
A. No, I'm not.
Q. You're not a cardiologist, are you?
A. I'm not a cardiologist, but I have some knowledge of all those three fields and know when to utilize the services of those specialists.
Q. But you would agree that sometimes -- withdrawn.
Exhibit No. 1 that we marked earlier was a copy of your invoices for your work performed in this matter?
A. Yes.
Q. Here it is. And I just want to make sure that these two invoices at least reflect the total amount of compensation you have received in the Blankenship matter as of August 14th, 2000?
A. Correct.
Q. Now, has Mr. Hamilton's firm submitted the

15,890 that was due on August 14?
A. Yes, they have.
Q. Now, I assume that this bill does not reflect the time you may have spent with Mr. Hamilton yesterday?
A. No.
Q. Do you know how many hours you spent with Mr. Hamilton yesterday?
A. I spent two with him yesterday.
Q. So the total billing in this matter has been a little over $21,000 as of August 14th?
A. Yes.
Q. And --
A. Actually, 3,000 of that I think was for travel and so forth. So --
Q. Just under 3,000.
Your rates -- If I can, your rates for reviewing the materials here, what is your hourly rate?
A. 350 per hour.
Q. The discussion you and I are having today,

what does that go for?
A. 400. Next time it will be higher.
Q. And if you have to come and sit in the stand in the State of West Virginia?
A. It will be 500 per hour.
Q. Per hour, plus expenses?

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A. Correct.
Q. Other than the Louisiana litigation, have you ever been retained to provide expert services for either a tobacco company or a law firm representing a tobacco company?
A. No, I haven't.
MR. HAMILTON: Before we move on, I think to probably clarify the exhibit, Deposition Exhibit 1 includes at least one entry that I will represent on the record appears not to be related to the Blankenship case. Specifically, on the second page there's an entry that says "Report Preparation." And as we've already established at this deposition, there is no report in the Blankenship case.
MR. JEKEL: Q. Okay. So that's probably a bill that needs to go to --
A. Right.
Q. And that is a substantial amount of time, 22.5 hours?
A. Yes. All after midnight, I'll add, too.
Q. All after midnight?
MR. HAMILTON: I don't know.
MR. JEKEL: With that exception, yes.
MR. HAMILTON: To make the record clear, do you need to answer counsel's question with a different

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figure or --
THE WITNESS: Yes. You would subtract 350 times 22.5 from the total.
MR. JEKEL: Q. From the total represented from these invoices. And that would give us the total billings to date plus whatever --
A. Right.
Q. -- extra time?
Again, in your report, what percentage of patients over 65 in the last year or two years could you tell me had lung cancers that you believe were associated with smoking?
Q. At St. Mary's?
MR. HAMILTON: And I don't want to be a pain in the ass, but you said in his report. And actually, you're referring again to Exhibit 4, which is his designation in Blankenship?
MR. JEKEL: Yes.
MR. HAMILTON: I'm sorry. Go ahead.
MR. JEKEL: That's right. I would not call that a report. No, sir. I'm sorry.
THE WITNESS: I've only seen one case of a lung cancer, primary lung cancer, in a nonsmoker in the past five or six years out of about maybe 15 or 20.
MR. JEKEL: Q. 15 or 20 patients over 65

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that you clinically treat or clinically are involved in the care of that have lung cancers, only one of which you believe was not related to smoking?
A. Correct.

Q. In that one patient, did you have an opinion as to the cause of the primary lung cancer?
A. No, I didn't.
Q. Doctor, do you have an opinion as to whether in the absence of smoking asbestos exposure alone could cause lung cancer? When I say an exposure to asbestos, provided it was of sufficient duration.
A. Latency and so forth?
Q. Latency, et cetera, yes.
MR. HAMILTON: I'll object to the extent that the answer isn't focused with those particulars.
But go ahead.
THE WITNESS: I don't know the answer to that question.
MR. JEKEL: Q. Okay. Second paragraph of the disclosure, first sentence, ". . . will be offered as an expert in the area of ambulatory medicine." Does ambulatory medicine have any relationship to what the Plaintiffs are proposing in West Virginia in the Blankenship case?
MR. HAMILTON: I'll object to the extent that

he doesn't know what the Plaintiffs intend.
But go ahead if you can answer it.
THE WITNESS: Ambulatory medicine is all that is not inpatient medicine. And so it reflects outpatients, both well and unwell, and it's where most screening maneuvers are performed.
MR. JEKEL: Q. I got you.
Moving on, "clinically-important attributes of medical screening tests." And you identify a few factors there: Sensitivity, specificity, predictive values, and reproducibility.
And if I could, if we're going to do what you've called a medical screening test, is that similar to what we've termed medical monitoring?
A. I believe so.
Q. I just want to make sure we use the same terminology.
So you believe that before you embark on a medical screening program or monitoring program, that the first thing you need to do is look at these factors?
A. There are six factors you need to consider.
Q. Right.
A. I'm not sure they're listed in --
Q. I don't think you have all six there. We may have seen all six in one of the handwritten notes?

A. Yeah. Six were in my report that you're not allowed to look at. The six factors are burden of disease; presymptomatic phase; performance characteristics of the test, and that means sensitivity, specificity, predictive value; reasonable side effects and minimal harm from the tests; cost-effectiveness, which may not be too relevant in this case; and finally, proof that intervention earlier in the disease improves outcome.
Q. The basis of these six factors, is this referred to in some authoritative text of some nature?
A. There's a lot of references for this. One reference is Oblone, O-B-L-O-N-E. That was in the pile. The U.S. Services Task Force you can glean all those. I think they listed them in a different fashion. Eddy,

E-D-D-Y, mentions it. It's mentioned in many different areas. I can continue, but --

Q. I just want to go through and quickly kind of flesh out these factors a little bit. Burden of disease: what exactly is that taking into effect?

A. That's taking into effect primarily the number of persons who were affected, or if it's a few members, and this is particularly in pediatrics, that it has devastating effects. The latter case would be screening for neonate hyperthyroidism, neonate TKU.

While uncommon, the burden is substantial because it is a neonate.

Q. Gotcha. Doctor, do you have an opinion as to whether cigarette smoking can cause disease?

A. Yes, I do.

Q. Can we quickly identify the diseases for which you believe smoking causes given that the smoking is of a sufficient amount or sufficient history? And we'll go over that in just a minute.

A. I think the smoking is -- smoking either causes or contributes to lung cancer, COPD, cancer of the oropharynx, lips. It contributes to cardiovascular disease, including ischemic heart disease and probably stroke. It's been associated with bladder cancer, pancreas, cancer of the cervix, I think.

Q. Now, when you say it's been associated with those three types of cancers, does that mean that something else must be present in addition to the smoking before you would say that the smoking was a cause of that disease?

A. Let me rephrase that. There is an attributable risk of these diseases from smoking. Cervical cancer, for example, never occurs in nuns because they're never sexually active, at least most. And it doesn't occur in smoking nuns, either. If you're

a physician at a Catholic institution, you learn these things.

Q. Yes. Thank you. As it relates to the diseases, we'll eliminate the associated ones right now, the bladder, pancreatic and cervical. Of the other diseases, do you believe there is a level of smoking below which you are not at an increased risk of these diseases. And if it differs by disease, we'll go through them one at a time. If it's not your area of expertise, that's great, too.

MR. HAMILTON: Just for clarification, I think his earlier testimony identified some diseases that smoking causes or contributes to and another group that contributes to. And you're wanting a response for all of those?

MR. JEKEL: Q. Either all or individually. I mean, we can go at it a variety of ways.

A. Yeah.

I think it's very hard to exactly set the cutoff. It's not a di -- it's a continuous variable and risk. So that as we said before, 99 percent of the attributable mortality to smoking occurs in people with a 20-year history of smoking. I would say that to clinical disease, there's probably minimal risk with five-year smoking. But in certain individuals it's

possible. An asthmatic who is smoking, that can be very severe. Someone with some underlying genetic problem, propensity to cancer might develop it sooner. I don't remember. I'm not quite sure where to draw the line. But the statistical significance is at 20 years.

Q. And the five-year -- when you said a five-year smoking history, again, is that a five-pack-year smoking history?

A. (Witness nods head.)

Q. You're referring to, when you talk about pack year, that's one pack a day every day for a period of five years?

A. When I think of that in broad terms, that's what I think of. But clearly, one a day for five years is different from two packs a day for five years.

Q. That would be a ten-pack-year of smoking?

A. That's correct.

Q. I want to make sure our definitions are the same.

A. It's clear that length of time and amount of cigarettes are both independent variables, and the mathematics is beyond me.

Q. Would smoking one cigarette a day for 20 years make a person at an increased risk of any of the diseases that you've identified?

A. I don't think so.

Q. So with regard to lung cancer, COPD, cancer of the oropharynx, cardiovascular disease, as it relates to burden of disease, how do those diseases measure up under that fact?

A. They measure of up well.

Q. So there is a sufficient number of persons affected by the diseases such to make screening useful?

MR. HAMILTON: And I'll object to the extent the question is unclear, again, in terms of the smoking history that you've been discussing.

THE WITNESS: Right.

MR. HAMILTON: Go ahead, if you can.

THE WITNESS: Substantial smoking, whatever that is, whatever we come to terms with that, what we mean by that, causes sufficient burden of disease in COPD, lung cancer, ischemic heart disease, to warrant investigation of screening programs.

MR. JEKEL: Q. And at least today you're prepared to say that a 20-pack-year history is sufficient amount of smoking; is that correct?

A. That's my clinical impression as much as anything else.

Q. But you would agree with me that further research may indicate that that could be ten-year

smoking history?

MR. HAMILTON: I'll object, ask the witness not to speculate.

THE WITNESS: Ten-year history would surprise me.

MR. JEKEL: Q. Okay.

A. 19 wouldn't.

Q. Again, going back to the six factors, the presymptomatic factor, what is does that entail?

A. Presymptomatic factor is that the disease has to be present for a certain time period without it

causing symptoms of disease.
Q. Do all of the diseases we've identified as related to smoking, do they all fall within that category as well?
A. There's some controversy about COPD, but in general, I would say there are presymptomatic states of the other diseases.
Q. Then the third factor that we talked about was the performance factor. And that, as I understand it, really takes into effect the sensitivity, specificity, predictive values, and reproducibility?
A. Correct.
Q. Now, let's just talk about the lung cancer for a minute and the modalities that the Plaintiffs have

proposed. Do you have an opinion as to the performance of the Plaintiffs' proposed modalities as it relates to sensitivity, specificity, predictive values, and reproducibility in detection of tumors of the lung?
MR. HAMILTON: I object on the basis that, number one, you're not specifically asking about any test, and number two, it's not clear which tests are going to be proposed.
But go ahead and answer if you can.
MR. JEKEL: Q. We can break it down by X-rays. Earlier, you -- Can you answer the question?
A. Why don't you give me a test, and I'll --
Q. As it relates to the performance factor, let's talk about chest X-rays only and their ability to detect tumors of the lung. Do they meet -- Do you feel they meet the sensitivity, specificity, predictive values, and reproducibility elements of performance?
A. I don't think they are very sensitive. I think their positive and negative predictive values are not very high. I think, also, that the inter-observer variability is quite substantial in chest X-ray as well, so there is an issue of reproducibility.
Q. Would your answer change if the only people who were getting X-rays were smokers that had in excess of a 20-year-pack smoking -- 20-pack-year smoking

history and were over the age of 40?
A. My answers would change for specificity. I think the tests would be more specific the older and more smoking that you have.
And since the -- I recall, is it the sixth decade or fifth decade that lung cancer really increases. That would be the time where I would apply the test. I would apply the test to the people that Dr. Henschke did, 63-year-old people with a 45-pack-year history of smoking.
Q. The X-rays?
A. Yeah. X-rays. Anything I'm going to use.
Q. So prior to the age of 63, well, smokers with a 20-pack-year smoking history, you would not suggest getting a chest X-ray?
A. I don't suggest getting a chest X-ray period. But if I'm going to design a study where I want to prove the value of screening with chest X-rays, I would try to pick older folks with more smoking history.
Q. Let's talk about the spiral CT scanning.
A. Yes.
Q. The same basic question: How do you rate it

under the performance factor for detecting tumors of the lung?

A. Yeah. We don't have follow-up data on it,

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but -- which limits my ability to answer that question. However, it certainly seems very sensitive, and I will stress the word "seems." And the specificity is very difficult to calculate without follow-up data.

I believe in a second study they found nine tumors that they hadn't seen in the first study. So the specificity is not yet established. And the positive predictive value, I think, is going to be low in most populations, unacceptably low.

Q. Does that answer change if the individuals that are only getting the spiral CT scan have the 20-pack-year smoking history and are over the age of 40?

A. The predictive value would be lower for those people than in Dr. Henschke's study. But if you make them older with a longer smoking history, it will go up in almost a linear fashion.

Q. And again, is your age where it would go up in the linear fashion 63?

A. We have data for 63 that there's better bang for the buck, so to speak, but again, we don't know if that does any good.

Q. Then we'll get to that.

A. Yeah.

Q. The reasonable side effects: What does that factor entail? As to whether the type of screening

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mechanism is going to actually be intrusive versus nonintrusive?

A. I think it goes well beyond that. I think that's the first step, which is, is there harm to the screening test itself. And to chest X-ray, there's a minimal radiation exposure that's usually ignored. However, if you're going to screen 300,000 people for 20 years straight and you do the math, you're bound to cause a few malignancies. And I summarize that in the report.

Q. You've summarize that in Exhibit 2?

A. Exhibit 2, right.

Another study, such as stress testing, is quoted as having a heart attack or mortality rate of 1 in 2500. So if you do that to 300,000 people, you're bound to cause substantial morbidity. There is a morbidity associated with the test itself. There is the discomfort, inconvenience, time off of work. That's the first.

Q. If I can stop you right there in that thought.

A. Sure.

Q. The figures that you gave me on the stress test, 1 in 2500, is there an article or some data for which you rely on that figure?

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A. Let's pull out the Cardiology.

Q. I don't want to go in-depth. I wanted to see if you can identify the article for me.

A. Maybe I misremember.

This is from the JOURNAL OF AMERICAN CARDIOLOGY. Right where I underlined.

Q. Okay.

A. JOURNAL OF AMERICAN COLLEGE OF CARDIOLOGY.
Q. JOURNAL OF AMERICAN COLLEGE OF CARDIOLOGY. July 1997, Gibbons, G-I-B-B-O-N-S, et al.
Continuing on with your earlier answer, is that the only article that you're relying on for that data?
A. There's other --
Q. But that's --
A. That's the most authoritative one.
Q. Thank you.
Now, I stopped you earlier in the middle of an answer that you were talking about the reasonable side effects factor --
A. Yeah.
Q. -- screening programs.
A. Then you have to look at primarily what happens to the people with false positive studies, and you have to see what happens to them. I guess if we're

talking about spiral CT, we don't have a lot of data yet that's looked at that. In the Henschke study, there were 27 tumors and 31 biopsies. So there are -- What does that mean? 11 percent of people, 13 percent of people who got unnecessary biopsies. That would be an example.
The best studied example, I believe, is repeated screening for breast cancer, where if you screen for a group of women for ten years, you will find 50 percent false positives, most of which will need to lead to biopsy.
Then we have the issue of how does a person's sense of wellness change after they have the false positive. And there's data which I can't quote -- I can't reference for you off the top of my head that shows that people who have these false positive studies have lower health perceptions and higher risk of depression and worry. That's quoted in the GUIDE TO PREVENTIVE SERVICES, for example.
Then you need to look at the people who have false negative studies. The commentary for that is, "I got my spiral CT. It's a real, real good test. Don't have cancer. Let me get another year in of smoking."
And that's very difficult to study, but it's certainly the clinical impression that people do that.

"I'm doing fine so far." And that goes for both the true negative and the false negative persons. They can each go with that.
Finally, we get to the true positives. The true positives are the ones we're looking for.
Q. Yes.
A. We have to be darn sure, I think, that we can help those true positives with the screening tests beyond letting things run their course and treating them when they're symptomatic. And that's almost a counter-intuitive point, but it has been -- but it reflects biases in terms of diagnosing a disease earlier than you would have and not really having effective treatment.
Q. And isn't that really the last factor, proof that intervention improves outcome, or is that also part of reasonable side effects?
A. We can split hairs. I think it's both. If I

give you unnecessary treatment for your prostate cancer, who knows? Who knows where we will put it?

I think I said most of what I believe about that.

Q. The minimal harm factor, again, what you are looking at there is, is it just the type, the modality of the mechanism used, or is it also the false positive,

false negative type effects as well?

A. In my experience, patients will tolerate the needle stick. Women don't like -- many women don't like mammograms. Nobody likes a colonoscopy. But to me, it's the cascade of further medical events that carries the biggest risk.

Q. But the harm here, you're not necessarily talking about physical harm but also psychological harm?

A. Physical and psychological harm. And not from the test itself necessarily, although that is true as we pointed out with stress tests, but from the further action that needs to be taken because of a positive or negative test.

Q. And let me just ask you with regard to the stress test, since we're here, is it your opinion that the harm from the stress test of screening potentially 300,000 people and that causing one heart attack in 2500 according to the article, that that harm is outweighed by any positive or any benefit that you may receive from administering the stress test?

A. That harm contributes to that risk-benefit analysis, and I'm not sure is -- might in itself be overwhelming the benefit. But there's more things that go on with stress tests.

Q. Again, my question is as it relates to

administering it in West Virginia on potentially 300,000 people, is it your opinion that the number of heart attacks that may be induced by the stress tests make it to where it should not even be considered?

A. Is the --

MR. HAMILTON: I'll object because I think he's testified that there were other things that enter into his opinion.

But go ahead and answer.

THE WITNESS: Yeah. There are other things, but that might be sufficient. I hadn't thought about that because we were talking about if this article is correct, 1,000 heart attacks or deaths for screening 300,000 asymptomatic persons. For the benefit, that may not be so dramatic. That might be the deal breaker alone. But there are other considerations.

MR. JEKEL: Q. I don't believe -- the stress test was not the initial test that has been proposed.

A. No. I think you're correct. But I think I more recently read Dr. Burns's last deposition in which there seemed to be some flux in what was being recommended. So --

Q. We'll just keep this out for reference.

A. We'll keep it out?

Q. Just in case we need it. I'm sorry.

Moving on in the factors, the cost-effectiveness, again, if you can briefly describe what that really looks at.

A. When you look at a variety of medical interventions, one way to compare their efficacy is to compare their costs per year of life saved. So for example, for screening breast cancer greater than 50 it's about $35,000 for screening breast cancer; between 40 and 50 it's probably at least ten times that. And so when you -- policy-wise when you are considering resources and so forth, that's something that may enter into your decision. I'm not sure it's so relevant in this case, because we don't have clearly limited resources.

Q. I would agree.

Have you looked at any -- As it relates to the items that Dr. Burns has identified, have you looked at any data as to the costs of administering that program?

A. I've glanced at it. I have not perused it.

Q. Do you consider yourself an expert in the cost mechanism of the Plaintiffs' program, the proposed program, as to whether it's cost-effective?

A. I think that it is impossible to derive a cost-benefit analysis for spiral CT, because there's not

enough data to tell you what's going to happen. You can't calculate the years of lives saved based upon a study that hasn't yet shown we've saved 20 percent of cancer lives. You can't do it.

Q. Did I hear you correctly that there is a 50 percent false positive in the screening for breast cancer?

A. In women screened with ten mammograms.

Q. With a minimal of ten mammograms, there's a 50 percent false positive now. But that's still a screening program that you would endorse?

A. I endorse it in women over 50. It's also part of the conversation I have before a woman undergoes her first mammogram under my care.

Q. Prior to the age of 50 or even after the age of 50?

A. Prior to the age of 50, the conversation is more important because the benefit is much lower. And there's a variety of ways of having that conversation. But I will tell a woman of 40 would wants screening mammography that expert opinion is that it has marginally been efficient, but she needs to understand that if she does it every year for ten years, she has over a one-third chance for having a breast biopsy for benign disease.

Q. And then the last factor is proof that intervention improves outcome. And again, what does that really mean? That we're doing some good with the screening program?

A. Yeah. We're doing some good. And the question is, what do you -- what criterion is it that you use that you're doing good? I would say proponents of screening for lung cancer say that you have a stage shift that's sufficient to prove good. I don't agree with that because other studies have shown stage shifts and no good has been done.

Purists say that mortality is the only thing that is free of bias. And I tend to be on that side of the discussion.

Q. Okay. So the first item where you talked about stage shift, were you referencing lung cancer?
A. Yes.
Q. In general, like if we detect lung cancer at a Stage IA versus a Stage II?
A. Correct.
Q. All right. And I just want to make sure I heard you correct. You're not or are you aware that there is data that would indicate if you detect lung cancer in smokers at a stage IA, that they have a higher cure rate as opposed to detecting that in Stage II?

A. I am aware of the data.
Q. Do you disagree with that data?
A. I don't disagree with that data, but that's not -- doesn't speak to the issue of the screening program. It's not a sufficient surrogate end point for mortality is what I'm trying to say.
Q. If a screening program is going to detect more lung cancers in Stage IA and Stage IA cancers have a higher cure rate than a Stage IIA cancers, that doesn't somehow relate to the mortality figure?
MR. HAMILTON: Let me object to the question as to the facts that the hypothetical assumes that are not in evidence.
But you can go ahead and answer.
THE WITNESS: Why don't we look at the data.
MR. JEKEL: Q. By all means.
A. Would you pull out Mr. Pulmonary?
Q. Mr. Pulmonary, right.
A. We're going to compare two figures. One is -- Sorry.
MR. HAMILTON: You should probably identify it for the record.
THE WITNESS: This is an article by Marcus, M-A-R-C-U-S, in the Journal of National Cancer Institute, 2000, August 16th. And it's the follow-up

study of the Mayo lung cancer project, mayo lung project. Okay. And this is a 20-year follow-up study.
So if we look at Figure 2, we can see that in the intervention group, the survival probability was higher for those people diagnosed with lung cancer at ten years; it looks like 30 percent versus 10 percent. And what that reflects is a, I believe, almost twofold increase in early stage disease.
Now, if we turn to Figure 1, and we can see total mortality or cumulative lung cancer deaths. Rather, we can see that more people in the intervention group in the screen group died at ten years than in a usual care group. So we have two conflicting pieces of information. Overall, people don't live longer, but those who are diagnosed seem to live longer. How do we explain that?
MR. JEKEL: Q. Can you explain it today?
A. I don't think anybody can really explain it, but there's a number of hypotheses. Certainly the people with early stage disease who were screened may have had -- Do you want to say something?
Q. No. Go ahead.
A. -- may have had intrinsically more indolent disease. They may have been diagnosed earlier, had no effect from treatment. That would be lead-time bias.

They may have had clinically nonrelevant tumors because they had other morbidities. And I would say I don't know which one of those it is. I don't know. I would tend to think it's overdiagnosis, which means that some of the tumors that are depicted, that are detected by screening, are not really clinically relevant.

Q. And that was one of the biases you talked about?

A. Yes.

Q. Do these biases properly fall under the intervention and outcome factor of screening programs?

A. I think those are the biases that you have to deal with in issue No. 6. And that is why you need to do in most cases randomized control trials with long follow-up.

Q. To exclude the biases or --

A. To -- Let me see if I can say this correctly.
To come up with data that is not colored by the biases.

Q. Let's just -- You identified a lead time bias. What are the other biases that you're referring to?

A. The -- Gosh. I guess there are four biases that I know of.

Q. Yes.

A. There's lead time, which is you appear to survive longer, but it's just because your disease is picked up earlier. And a good example with that is probably prostate cancer or certain very early forms of breast cancer.
There is length time bias, which is that the more indolent diseases are picked up by screening. The more aggressive diseases become symptomatic more rapidly, and they're over represented in the other group. That's actually been -- Am I talking too much? Okay.

Q. No. Go right ahead.

A. -- shown in a recent breast cancer study. What would that be under? Screening, probably.
This is an article in the ARCHIVES OF INTERNAL MEDICINE, April 24th, 2000. And their conclusion was "Even within similar stages, the mammography-screened group had better disease-free survival than the nonmammography group. These results suggest that many of the breast cancers found by mammography have excellent prognosis because many of the cancers are relatively benign requiring minimal therapy."
So what they did was they looked at all the breast cancers at Yale University over a certain time,

matched them for stage, and found that those found by mammography did better for some reason, and that would speak to some kind of length bias. Those were more indolent cancers.

Q. The other biases?

A. How many have I done?

Q. Lead time, length time.

A. Overdiagnosis. It's kind of an extreme length time that you pick up clinically nonrelevant disease. So it looks like you're saving lives.

Q. In the case of West Virginia, you mentioned histoplasmosis. Might a case of histoplasmosis that would appear as a spot on a lung under an X-ray or CT scan, yet that person never -- or that person would have a longer survival rate in terms of a lung cancer because that person never had a cancer?

A. Actually, the histoplasmosis would impair the sensitivity of the test. It wouldn't affect its bias. The bias that would be relevant would be that by using these new technologies, we're picking up things we call cancer that don't act like what we usually think of as cancer.

Q. In terms of lung cancers, you mentioned earlier that an individual over 65 with a smoking history in the four centimeter tumor, that's one you

would go ahead and operate on; you wouldn't need anything else?

A. Correct.

Q. Is there any definition as to or parameters that we could put on what we're looking for in the CT scans or the X-rays or any other screening that we did that would eliminate the overdiagnosis factor or the overdiagnosis bias?

A. Yes. You can do that with any test. And you can do it such that every positive diagnosis is correct. But then you lose sensitivity. So it's a balancing act. If we said we'll only operate on and follow up four centimeter tumors, you'll be missing --

Q. Small amount?

A. -- three centimeters, two centimeters. So it's --

Q. As it relates to tumor size and lung cancers and stages, is that something that you feel you have sufficient expertise to identify what size a tumor should be followed up or at what stage?

A. I would get consultation if I had a patient with this as to how best to proceed. I do know that the later stage tumors have less -- have worse survival. But within Stage IA, less than three centimeters size doesn't seem to matter so much. So I would have to get

an expert opinion if I had a patient with that.

Q. But at least as it relates to -- I'll withdraw.

Overdiagnosis was there.

A. The other bias is lack of comparability of the controlling intervention group. That means you're following -- I'm boring you, I can tell.

Q. Okay.

A. That the control group and the intervention group don't have risk factors for disease that are balanced.

Q. Now, in the West Virginia population, would that factor really apply to lung cancer, or might it apply to some of the other COPD, hypertension, stroke, things of that nature?

A. Well, this applies not to West Virginia so much as whether the studies evaluating the screening test are valid. So all our studies so far when screening for lung cancer have been essentially negative. The only bias that could make them falsely negative is lack of comparability of the groups.

Q. Have you been asked to or do you think that you have the expertise in potentially developing a screening program for smokers in the state of West Virginia based on these six factors that you identified?

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MR. HAMILTON: I'll object. He's testified as to that already.

But go ahead and answer it if you can.

THE WITNESS: I would give smokers the same screening program that I would give to age-matched patients, age- and gender-matched patients.

MR. JEKEL: Q. I'm not sure I --

A. In other words, the guidelines that I use for healthy adults I would apply to West Virginia. I wouldn't do any -- I wouldn't do anything for this class I wouldn't do for another person of the same age and gender.

Q. Maybe it was a poor question. Probably so.

Do you think it's a good idea in general to screen smokers early in an effort to detect smoking-related diseases?

MR. HAMILTON: Again, I'll object. Lack of specificity in your question.

But answer it if you can.

THE WITNESS: I believe we've been talking about that for sometime now. And based upon current evidence, I do not think it's a worthwhile enterprise. I believe that the harm which we will go through in some detail will outweigh even the benefit.

MR. JEKEL: Q. There's a general view. If

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we were to put some parameters on the groups of smokers that we screen, for example, only those over a certain age with a certain pack-year history, do you then believe that screening of a more limited population may be beneficial?

MR. HAMILTON: Same objection. Go ahead.

THE WITNESS: I don't think there's any threshold. I think I will get less vehement in my proposal the higher the prevalence of the diseases in the group you're screening. But I don't think to me it rises to the level of I'm going to screen you because you're a smoker with 40-pack-year history and are 75 years old, and I won't screen Fred because he's 75 but doesn't smoke.

Q. Okay. Referring back to your disclosure, if you have it there in front of you -- I'm sure you have it there in front of you somewhere. There it is.

We were talking about he may offer testimony concerning clinically-important attributes of medical screening tests as these relate to the screening tests proposed by plaintiffs' experts. Well, I guess the term "plaintiffs' experts" in your disclosure is plural. It's my understanding you've really only looked at Dr. Burns to date?

A. To date for this case?

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Q. Yes.

A. That's now my understanding.

Q. All right. For purposes of the deposition, I'd like to -- can we make that "plaintiffs' expert" assuming that, you know, should new information happen or come out after our deposition, that's something the

lawyers will talk about. But I just want to make sure medical monitoring program proposed by plaintiffs' experts -- let me ask you.

A. Dr. Burns made it very clear that he has worked with a panel of people and has assistants and people working for him. I'm not sure they include experts, but --

Q. I'm just trying to limit what you've seen, and today we know it's Dr. Burns's report.

A. Right.

MR. HAMILTON: Let me state for the record so the record is clear that Dr. Sockell has been given a report of Dr. Gupta.

THE WITNESS: That's right.

MR. HAMILTON: I won't speak for Dr. Sockell whether he's prepared to offer opinions about it or whatever. But just so the record is clear.

MR. JEKEL: Maybe it's in here.

THE WITNESS: It may be.

MR. JEKEL: It may be. Fair enough. Thank you

Q. Again, referring to the statement "clinically-important attributes of medical screening tests as these relate to the screening tests proposed by plaintiffs' experts," we've talked about X-rays, that they may not be sensitive enough, and some of the other factors, sputum cytology as it relates to the proposed program. How does that fit in with the factors of sensitivity, specificity, predictive values, and reproducibility?

A. As I recall, the specificity is very good for sputum cytology. It's very, very insensitive, though, and has been shown in the NCI studies to not add anything to chest X-ray.

Q. Okay. And the spiral CT scanning, I think we've covered that pretty well. Would you agree? Do you have anything to add about the spiral CT scanning as it relates to performance and the other six factors -- the other five factors?

A. I don't think so.

Q. And PET scanning, P-E-T scanning, do you have anything?

A. I've said everything I have to say about PET scanning.

Q. Thank you. How about electrocardiogram as it relates -- I mean, we've kind of focused on the lung cancer aspect. Understanding that there is electrocardiogram testing in the program, how does that fall in here?

A. Most organizations, maybe almost all, do not recommend routine EKG's for asymptomatic persons, the reason being that the sensitivity and specificity are not adequate, that many people with severe coronary artery disease referred for bypass have normal EKG's; most people who die suddenly with an MI have normal EKG's. So it's not generally recommended by the American College of Physicians, Canadian Task Force and U.S. PSTF.

Q. Very good.

Your disclosure goes on, "He is expected to testify concerning the probable negative effects of the

institution of the monitoring program proposed by plaintiffs' experts, including but not limited to the adverse effects of false-negative and false-positive testing; the phenomena of 'labeling' and 'pseudodisease'; and other risks and human costs associated with plaintiffs' testing proposals."

That's quite a mouthful. Let's break it down. "Probable negative effects of the institution of

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the monitoring program proposed by plaintiffs." And let's not talk about false negatives or false positives. What other negative effects are there?

MR. HAMILTON: Can you answer the question the way it's phrased? Go ahead and answer it.

THE WITNESS: I'm not sure if we haven't covered it already.

MR. JEKEL: Okay.

THE WITNESS: False negatives, false positives, the test itself, the cascade of events and psychological and health awareness.

MR. JEKEL: Q. I just want to make sure we have it all somewhere.

A. I think that's appropriate.

Q. We talked earlier about labeling as well. Pseudodisease: I'm not sure I follow what the reference there is. Is that your word, "pseudodisease"?

A. That's Mr. Hamilton's word.

Q. Would you use that word?

A. It's a word that I'm not very facile with. It's in the labeling literature where it's an abnormality that is called a disease but really isn't or isn't really relevant. So I'm not quite --

Q. We can strike it from the disclosure if you like.

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A. "Pseudodisease." That would be fine with me to strike that. I think I can make my point without it.

MR. HAMILTON: I will object to counsel asking the witness to strike material filed on behalf of the defense in this case, but --

THE WITNESS: Sorry.

MR. JEKEL: Q. You understand that's what you're going to testify to. Will you use the word "pseudodisease" at trial?

MR. HAMILTON: I'll object. I think the witness has testified that he's familiar with the concept of pseudodisease.

MR. JEKEL: But he wouldn't mind striking it from his disclosure.

MR. HAMILTON: He may not mind striking it, but at this point I object to any effort to cause him to anticipate his trial testimony at this point.

MR. JEKEL: Very good. We're not going to waste time on that.

Q. "Other risks and human costs associated with plaintiffs' testing proposals." I think -- have we also covered those?

A. We've covered those, except for some of the obvious things, like time off from work maybe. I'm not familiar with West Virginia. If there's only one spiral

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CT scanner, there will be more driving; there might be more accidents. Who knows? Stuff like that you'd have

to factor into your analysis.
Q. Okay. Have you done an overall cost-benefit analysis of the proposed program of the Plaintiffs?
A. No, I haven't. I didn't need to.
Q. You didn't need to? And why was that?
A. Because we failed on the performance characteristics and point No. 6. So it would have been busy work.
Q. With regard to treating geriatric patients, I assume that unfortunately you do encounter a lot of people that their prognosis is not very good and they're going to die?
A. Yes, I do.
Q. Is that fair?
A. Yes, that's fair.
Q. And I assume that a lot of -- a large portion of your practice is having to sit down with those patients and discuss that with them, is it not?
A. Yes.
Q. Do you think that -- I mean, why do you let them know that "Hey, your outlook doesn't look good. You may only have six months to live?" Why do you engage them in that conversation?

A. It's my job, and they deserve it.
Q. Does it not also allow them to get their things in order, make sure that plans are made, paperwork may be generated to assist the family in the individual's passing?
MR. HAMILTON: Objection. Compound.
You can answer.
THE WITNESS: Theoretically. I haven't encountered that, but I will grant you that allows them to start making peace with what's going to happen with them.
MR. JEKEL: Q. And do you not think that that's of some benefit to the patient no matter how hard it is for them to accept?
A. I think it's of tremendous benefit to patients.
Q. So even with the mortality rates in individuals with progressive lung cancer, knowing that they have a disease that you may not be able to help may give them some benefit in knowing that they've got inoperable lung cancer?
A. Yes.
Q. Continuing on in your disclosure, "He is further expected to testify concerning medically-reasonable guidelines for the design and

conduct of screening or monitoring programs in ambulatory patients and the ways in which plaintiffs' proposals fail to meet minimum acceptable standards for such programs. " I'd like to see if we can't flesh out, and I think we have, what the minimal acceptable standards are for a screening program.
MR. HAMILTON: I'll just object for the record because I think we've already covered this territory.
But go ahead.
MR. JEKEL: That's fine. I just want to make sure we have.
THE WITNESS: I could try to rattle off those

six points we've gone over.
MR. JEKEL: Q. Is it the minimal acceptable standards? Again, you're referring to the six factors that you've discussed?
A. Correct.
Q. And we've also identified some of the authoritative texts in which those six factors are discussed?
A. Correct.
Q. Correct? And you know, I don't want to rehash what we have already discussed. But you felt that plaintiffs' program didn't meet the performance

aspect?
A. Correct.
Q. And it did not meet proof that intervention improves outcome?
A. Correct.
Q. Are there other ways in which plaintiffs' proposal failed to meet that? And if we could quickly identify those.
MR. HAMILTON: I'm just going to object, also, for the record because what plaintiffs' proposal consists of is not clear to the defendants.
MR. JEKEL: You can have that all day long. If it's not clear to the doctor, he can let me know. If it's not clear to you, I can care less.
MR. HAMILTON: Go ahead, Doctor, and answer the question, if you can.
THE WITNESS: Would you read back his question before their interchange?
MR. JEKEL: I'll restate it, if I may.
THE WITNESS: Okay.
MR. JEKEL: Q. Other than what we've discussed earlier today with regard to the performance factor and the sixth factor, are there other ways in which plaintiffs' proposal, as you know it, failed to meet minimal acceptable standards for screening

programs?
A. Yeah. The only thing I would add to that -- and this may not be the case. But not knowing West Virginia, I don't know what kind of resources, if the resources are available in local West Virginia communities to perform the kind of monitoring with follow-up that you're -- that the plaintiffs are proposing. You find screening programs -- that doing something at the university with not only state-of-the-art technology but tremendous commitment to the research study changes when you go out to the community. That's happened in breast cancer screening, for example. So that would be a piece that we would need to know if we got past the other demerits.
Q. And if you would turn to the second page, the last paragraph indicates you "may testify as to other facts and opinions he may possess as an expert concerning other issues that may be raised at trial by witnesses called by the plaintiffs or co-defendants that fall within" your expertise. And I just want to insure that as you sit here today that we have gone over your opinions as it relates to Dr. Burns's or the plaintiffs' proposal as you know it?
MR. HAMILTON: I'll just object for the

record.

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Go ahead and answer if you can.

THE WITNESS: Could I ask you to tell me what the plaintiffs' proposal is to the best of your knowledge?

MR. JEKEL: Q. I would refer you to paragraphs 32 through 36 of Dr. Burns's February 3rd, 2000 --

A. And ignore his last deposition?

Q. No. I would have to include his last deposition and modifications made to those perhaps by his last deposition, in all fairness. And if you want to take a moment to look at that to properly answer the question, I think it would be worthwhile.

A. Sure.

Q. And we could go off the record while you review that because I assume it might take a few minutes.

A. If you want to take a short break.

MR. JEKEL: We will go off the record for about five minutes for the folks on the phone.

(Recess taken from 12:12 to 12:18 p.m.)

MR. JEKEL: Q. So what's your answer?

A. Yes. Looking at Dr. Burns's report, he recommended an EKG and spirometry at age 40.

Have we spoken about spirometry?

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Q. I don't think we have.

A. So --

Q. Give us your answer first. We'll come back to spirometry.

A. At 45, he recommends repeat EKG with stress test if there's anything wrong, symptoms or based on the EKG as well as a history. He recommends resume spirometry and then repeating it every two years.

At 50, he recommends chest X-ray, cytology and newer tests as they become available.

From reading his most recent deposition a couple of nights ago, I believe he was much more advocating for stress tests than EKG, as I recall. And I might be wrong on this. I'm not sure where he stood on chest X-ray or cytology, but he was advocating for the spiral CT, I think maybe alone. I'm not quite sure alone without chest X-ray and cytology.

To go backwards, I believe I stated my opinion on chest X-ray, cytology and spiral CT. I think I've been fairly clear about EKG and stress testing in asymptomatic persons.

Q. Yes.

A. That I would not recommend that.

And spirometry: I can make a few comments on that. I would be apt to test -- in the setting of a

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smoking history, a spirometry is a reasonable test of to the degree of lung function. It's not clear to me that spirometry always distinguishes between those people bound to get obstructive lung disease and not bound to get obstructive lung disease. There's a fairly broad scatter.

What is the value in diagnosing obstructive lung disease early? There's probably no value other than to encourage persons to stop smoking. None of the

other medical therapies we have really make a difference, or at least that's not been proved. And the only question would be if I know I have an abnormal spirometry, am I more apt to stop smoking? And the literature is fairly sparse on that and definitely split. And the best review seems to suggest not. And it certainly hasn't been my clinical experience that when I get a spirometry on someone with COPD, "Oh, my gosh, Doc, my FEV-1 is .9. I better stop smoking."

So it's not a test that I think I would recommend either.

Q. As it relates to patients quitting the habit and stopping smoking, do you find, though, that the clinical intervention when they have to come see you, and if they have to come see you once a year, and every year "You've got to stop smoking. You've got to stop

smoking. You've got to stop smoking," is that effective in --

A. The literature supports that physician advice has a modest benefit in encouraging people to stop smoking. When you combine it with other modalities, multi-modal modalities, it gets a bit better.

Q. Can you identify some of those other modalities?

A. Behavioral groups, nicotine replacement therapy, possible anti-depressant therapy.

Q. Do you have an opinion as to whether nicotine is an addictive drug?

A. Yes, I do.

Q. What is that opinion?

A. My opinion is that it is an addictive drug.

Q. Have the attorneys for Brown & Williamson showed you any of the Brown & Williamson internal studies on nicotine and nicotine addiction?

A. No, they haven't.

MR. HAMILTON: I'll just object for the record on the line of questioning since Dr. Sockell is not being offered as an expert in addiction.

MR. JEKEL: Any time you want to limit his expertise, it's fine with me.

MR. HAMILTON: You've got his disclosure,

so --

MR. JEKEL: Which was eminently enlightening, not like the Exhibit 2 we have.

Q. When you see a patient and you're trying to evaluate and treat that patient, do you go through and try and obtain the various risk factors that that patient may have?

A. Risk factors for?

Q. For disease.

A. For disease?

Q. Yes.

A. That's part of my general physical, yes.

Q. And do you consider all of the potential risk factors for disease in designing a plan for care, treatment and diagnosis?

A. All the risk factors for disease and negative outcomes is very, very -- it's probably a four-hour history and physical examination. I try to target to the most relevant things for the age and gender of the patient.

Q. In your clinical practice, where does cigarette smoking fall in there?
A. Cigarette is -- The goal for cigarette smoking is ask every patient every time. I don't quite achieve that. But every patient I have who smokes has

been -- I have discussed it with at some point.
Q. Because the percentage of individuals that your primary practice deals with are in general over 65, would you consider cigarette smoking to be one of the higher risk factors for disease that that patient may have?
MR. HAMILTON: I'll object because I think he testified that his outpatient practice is rather younger than that.
MR. JEKEL: His outpatient, excluding that.
THE WITNESS: Yeah. I think cigarette smoking is an important risk factor for any age.
MR. JEKEL: Q. Earlier, we talked about the screening programs that you were pro screening for. And you identified breast cancer, colon cancer, diabetes, vision in elderly, cervical cancer, hypertension, and hypercholesterolemia.
A. Yes.
Q. And all of those, taking them as a group, are there any of those screening programs where the screening has not affected the mortality or that intervention has not -- that intervention has not improved the outcome?
MR. HAMILTON: Can you answer that as a group, Doctor?

MR. JEKEL: Q. If you can. I mean, we can go down each one.
A. There's only -- breast cancer, colon cancer, cervical cancer, intervention has definitely improved outcome. Hypertension definitely has improved outcome. Hypercholesterolemia has definitely improved outcome in multiple studies. Vision: May I check for a second?
Q. Have at it.
A. Okay. I think it's a Class B recommendation from the U.S. Task Force. I'm not sure of the primary studies, though.
Yes, it's improved outcome also for vision.
Q. Can you tell me, as it relates to breast cancer screening, when do you start screening for breast cancer?
A. With which modality?
Q. X-ray.
A. Mammography?
Q. Mammography.
A. I definitely start at 50, or bring it up at 50. And in the 40s, I discuss it.
Q. So prior to the age of 50 in women and screening for breast cancer, is it your opinion that they would first need to see a physician and have this discussion prior to just giving them a mammography?

A. I see what you mean. I would recommend that.
Q. Have you seen the American Cancer Society's guidelines for screening for breast cancer?
A. Yes, I have.
Q. And the National Cancer Institute?

A. I'm sure I have, but I don't remember them as clearly.
Q. And do you have criticisms or things you would like to change with regard to their screening of breast cancer in women?
A. I think the ACS recommends self exam starting at 20 or 25; then clinical breast exam until, I think, 30 to 40; and then yearly mammography at year 40 and every year or two at age 50.
I don't mean to sound politically incorrect, but I'm not sure there's a lot of value to screening before age 40. Age 40, as we spoke about, I think it's more of a -- what's called in screening literature a toss-up as to whether you perform the tests. And you have to very much individualize it to the woman -- with the woman, actually.
Q. Have you written the American Cancer Society and voiced your concerns about their screening program?
A. Have I written them?
Q. Yeah.

A. No, I haven't written them.
Q. Have you ever written an editorial or article where you've made that clear that you're in disagreement with the American Caner Society's statement on screening for breast cancer?
A. There are far more important researchers in the country who have done that.
Q. You're here talking to me today, so I'm limited to only asking you.
A. However, you're asking someone here today who has done more screening than those researchers and seen more visits and who has two -- at least two clinic-specific screening programs that he's designed.
Q. So you would be the most likely person to write the ACS and tell them, you know, "You don't" --
MR. HAMILTON: Objection.
MR. JEKEL: Q. -- "You have some problems." But we'll withdraw that.
A. I'm too busy.
Q. We'll withdraw that comment.
A. Yes.
Q. That's okay.
Have you seen this text before?
A. Yeah, I think I have. I recognize the author.

Q. Do you consider Dr. Eddy to be authoritative on the topic of screening?
A. Yes, I do.
MR. HAMILTON: Are we going to mark this?
MR. JEKEL: No.
MR. HAMILTON: Okay.
MR. JEKEL: Q. Doctor, I believe you testified earlier today when we were talking about X-rays that you don't recommend X-rays. And I don't want to characterize your testimony. So I'll ask a new question.
In a patient with a smoking history -- and if we need to categorize what we mean by smoking history, let me know.
-- have you ever recommended a chest X-ray even though the individual is asymptomatic of any

smoking-related diseases?
A. I don't think so, unless I found something on physical examination.
Q. And what things might you find on physical examination that would --
A. Nailbed changes, percussion or auscultation of the lungs, lymphadenopathy.
Q. Anything else?
A. Those would be the most common points.

Q. What is the treatment for lung cancer?
MR. HAMILTON: I'll just object as there are multiple kinds of lung cancer. If you could break it down, that probably would be a better question.
MR. JEKEL: Q. Primary lung cancer, smoking-related.
MR. HAMILTON: Same objections.
MR. JEKEL: Q. You need cell type, location of the lung before you --
A. I'll just say nonsmall cell.
Q. Nonsmall cell?
A. The treatment is surgical resection if it's Stage I or IIA, I believe.
Q. And is that the only current treatment for nonsmall cell lung cancer?
A. There are more palliative treatments. XRT and, I think, sometimes chemo is used in some protocols.
Q. How effective are those treatments?
A. In terms of palliation or in terms of mortality?
Q. Palliation.
A. They have some benefit in palliation. Radiotherapy, in particular. I don't know the data on this, but I've certainly seen benefit in terms of symptoms in chemo. I'm not an expert on at all.

Q. What about on the mortality side?
A. I believe they don't have an appreciable effect on mortality.
Q. Would you agree that early detection of lung cancer and intervention with treatment could elongate a patient's life?
MR. HAMILTON: I would object as to the term "early detection."
MR. JEKEL: Q. Detection of lung cancer at Stage I with intervention and treatment. Would you agree that that could elongate the patient's life?
MR. MILLER: Show an objection to the vagueness of the question and its hypothetical nature.
MR. JEKEL: Q. Can you answer the question, Doctor?
A. Do I agree that --
Q. Early detection --
A. Early detection of lung cancer.
Q. Stage IA lung cancer following with intervention and treatment could elongate the person's life?
A. Do you mean early detection --
MR. HAMILTON: Objection.
THE WITNESS: -- in the realm of a screening program, or do you mean that someone with Stage IA has a

better prognosis than someone who has Stage IIB?

MR. JEKEL: Q. Let's take them both.
A. Within the realm of a screening program, there is no evidence that there was an overall mortality benefit in the stage shift that you see with screening programs.
If you came to my office, had a cough, we got an X-ray and we had Stage IA, we'd be very happy. If you were at Stage III, we wouldn't. Or if I got an X-ray for another reason.
Q. I want to go back to this July 13th meeting in Atlanta. How long did the meeting last?
A. I think about two hours.
Q. Were you given a -- Were you asked questions in terms of what your opinions were? Were you asked whether you thought smoking was a cause of lung cancer?
A. Yes.
Q. Were you asked whether you thought nicotine was addictive?
A. Yes.
Q. Were you videotaped?
A. Not that I know.
Q. Were you given -- or by the meeting in July, had you already seen Dr. Burns's report, the revised report?

A. I'm pretty sure I did. Now that I actually think about it, I think I had my report typed up by then.
Q. The report from the other litigation?
A. Correct.
Q. Okay. Did you provide a copy of that report from the other litigation to Mr. Hamilton, counsel for Brown & Williamson?
A. I'm sure I did. He paid for it.
MR. JEKEL: Not me.
MR. HAMILTON: Let me state for the record --
MR. JEKEL: We have Fred's --
MR. HAMILTON: -- neither I nor my firm as counsel in the Blankenship litigation paid for the report.
MR. JEKEL: Brown & Williamson may have paid for it.
THE WITNESS: They paid for it.
MR. JEKEL: Q. Did they have criticism of the report that is marked as Exhibit 2, as you recall, or do you know if they had -- I'm sorry. Let me withdraw it.
Did you provide Exhibit No. 2 to counsel for Brown & Williamson prior to your meeting?
A. I believe --

MR. HAMILTON: I'm going to renew my objection to any questions concerning Exhibit 2, which is a report in the Scott case, on the basis that neither counsel for plaintiffs nor counsel for defendants is represented at the deposition today.
MR. JEKEL: Q. Let me ask you this: Does Exhibit No. 2 accurately and fully set forth your opinions on a screening program for smokers and your opinions on screening of smokers?
MR. HAMILTON: And again, I'm sorry. I have to object insofar as I understand it --
MR. JEKEL: Your objection is on the record.

I don't want to hear any more of your comments that counsel is not here and all that.

MR. HAMILTON: I wasn't going to object about counsel. I wanted to note for the record that the same proposals are not involved in the two cases, as I understand it, and that makes the question misleading.

MR. JEKEL: That's fine.

THE WITNESS: Am I to answer something?

MR. JEKEL: Q. Yes. You're entitled to answer.

I'm sorry. Would you please repeat the question? Have I set forth all my opinions with regard to smoking?

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Q. And screening.

A. I don't think all my opinion but certainly the major ones, and we've talked about them.

Q. Exhibit 2 certainly contains a lot more information than the page and a half disclosure we have on your opinions in this case; right?

A. It has more detail.

Q. Yes. And is the detail reflected in Exhibit 2 also applicable to the Blankenship case in West Virginia?

MR. HAMILTON: Same objection.

THE WITNESS: The part that's relevant to Blankenship is relevant to Blankenship.

MR. JEKEL: Q. Right.

A. I would say.

Q. Fair enough.

In your practice, what modalities do you use in diagnosing COPD?

A. History and physical.

Q. In the physical, what do you look for?

A. Shape of the chest wall. Low diaphragms. How the person breathes: distant or abnormal breath sounds.

Q. After that, do you follow that up with spirometry, or is that something you do not use in your

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practice?

A. I use spirometry when I am -- in a couple of cases with COPD. I use it if I think someone is severe enough that they might benefit from oxygen therapy. These people are always symptomatic. I use it preoperatively for any major kind of surgeries. And I use it if I think a person might benefit from a trial of corticosteroids, in which case I like to benefit with the therapy.

Q. When you're going to use the steroid therapy, is that person symptomatic?

A. Invariably.

Q. You mentioned MI earlier when we were talking about heart disease. By MI you were referring to a myocardial infarction?

A. Correct.

Q. What is that?

A. A myocardial infarction is death of cardiac muscle due to blockage of the blood flow.

Q. Does early detection of cardiovascular disease and intervention elongate a patient's life?

MR. HAMILTON: Objection. Misstates specificity in question.

THE WITNESS: Can you sharpen the question, which one you're talking about?

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MR. JEKEL: Q. Can you answer it the way I've asked it? If you can't, that's fine.

A. Let me break it up. If you have somebody with clinical coronary heart disease who has had a myocardial infarction, there are interventions that improve the patient's survival. If you have someone with heart failure on the basis of coronary heart disease, there are interventions that improve the patient's survival.

If you have -- There are three major vessels that serve the heart muscle. If you have disease in all three of them with a diminished ejection fraction, surgery will improve survival. If you have anatomic disease of the left main artery that feeds these three arteries, that will improve survival.

I think the question you're getting at is what if you have heart disease and don't know it, have there been any interventions to show that survival is improved? And I have not seen that to be proved in a case.

Q. And how do you go about identifying and diagnosing cardiovascular disease as the problems you've identified?

A. It's history and physical primarily.

Q. And with the physical, what are you looking

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for? Is that the same that we identified --

A. Physical isn't very sensitive. History is much more sensitive with the diagnosis of coronary heart disease. Sometimes you can --

TELEPHONE VOICE: This meeting is scheduled to end in ten minutes.

MR. JEKEL: As if we needed that reminder.

MR. HAMILTON: Sorry.

MR. JEKEL: That's all right.

THE WITNESS: Yeah. Just some subtle things on physical might be helpful. Sometimes there's a slight murmur or extra heart sound that may give you a clue.

MR. JEKEL: Q. We talked earlier about prior work for tobacco companies or lawyers representing tobacco companies. Have you provided expert deposition testimony on medical screening programs in general?

A. Not in general.

Q. You've provided expert testimony in other litigation, nontobacco-related?

A. Yes, I have.

Q. Did any of that testimony go to diagnosis and/or treatment of lung cancer?

A. I don't think so.

Q. How about diagnosis or treatment of COPD?

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A. No.

Q. Cardiovascular disease?

A. I'm sure I've done some medical malpractice work involving cardiovascular disease.

Q. Do you know if any of that involved the allegation that earlier detection may not have resulted in some bad outcome?

A. Not in the realm of a screening program.

Q. Do you maintain a list of cases in which you've provided deposition or trial testimony? In the exhibit that we can't talk about you may have a list. Is that what you're --

A. Yes.

MR. HAMILTON: We will be happy to provide whatever information the doctor has on that subject.

MR. JEKEL: I still want -- Exhibit 2 will be made an exhibit to this deposition.

THE WITNESS: I have it here somewhere.

MR. JEKEL: Q. You do have it in here?

A. Yeah.

Q. Can you identify for me the med mal case very quickly for me that may have involved the heart disease or cardiovascular disease?

A. I don't think any of these. These are the past four years.

Q. Past four years?

A. I don't think so, no.

Q. Is it on there?

A. No. I don't think any of these did.

Q. Well, Doctor, I want to thank you for your patience today. Those are all the questions I have at this time.

MR. HAMILTON: Do we have any questions from the --

MR. JEKEL: Folks on the phone?

MR. HAMILTON: -- folks on the phone.

MR. MILLER: No questions.

MR. HAMILTON: Anyone else?

MR. MORRISON: I am just local counsel. No questions.

MR. HAMILTON: If there are no questions on behalf of Brown & Williamson and if no one has any further questions, the deposition is concluded.

THE REPORTER: Would counsel please state whether they would like a copy of the transcript and exhibits?

MR. MILLER: I do. Do you have my address and phone number?

MR. MORRISON: We will say no now. And if we need one, we'll follow up with you.

MS. WEBER: I'll call you. I don't know.

MR. HAMILTON: I would like a copy of the transcript. I would like a large copy, minuscript, and ASCII disk, with exhibits attached.

(Deposition adjourned at 12:53 p.m.)

--oOo--

I declare under penalty of perjury that the foregoing is true and correct. Subscribed at _____, California, this____ day of_____, 2000.

_____

MARK E. SOCKELL, M.D.

CERTIFICATE OF REPORTER

I, CLARE MACY, a Certified Shorthand Reporter, hereby certify that the witness in the foregoing deposition was by me duly sworn to tell the truth, the whole truth and nothing but the truth in the within-entitled cause;

That said deposition was taken down in shorthand by me, a disinterested person, at the time and place therein stated, and that the testimony of the said witness was thereafter reduced to typewriting, by computer, under my direction and supervision;

I further certify that I am not of counsel or attorney for either or any of the parties to the said deposition, nor in any way interested in the event of this cause, and that I am not related to any of the parties thereto.

DATED: _____, 2000.

_____

CLARE MACY, CSR 5256